THE SCIENTIFIC PAPER

How to Prepare It
How to Write It

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How to Write It

A HANDBOOK FOR STUDENTS AND RESEARCH WORKERS IN ALL BRANCHES OF SCIENCE

BY

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Columbia University

BALTIMORE

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PREFACE

This manual is intended to meet the practical needs of students and research workers who are preparing papers on scientific or technical subjects. The student who is confronted with the arduous task of "writing up" his data will find in this book many suggestions that should not only lighten his work, but enable him to present his material in a more effective way

Writing is an essential part of the scientist s profession The final and in some respects the most important stage in any scientific investigation is the preparation of the results for publication. After a scientific or technical worker has done a good piece of research work, he should present it to his colleagues in the best possible form. Failure to do so as may be noted in many cases may largely discount the value of the work itself The average technical specialist tends to think that his work is done when the research project as such is finished, and to regard the publication as an unnecessary evil and a nuisance. As Charles Darwin expressed it, "A naturalist's life would be a happy one if he had only to observe and never to write."

Few people in fact, like to write Certainly few are able to write easily and those who can sit down and dash off a good scientific paper in a few hours are indeed rare The time factor is far more important than the beginner in science is likely to realize Most candidates for the doctorate should devote at least three months to the writing of a dissertation running to the usual length of about forty typewritten pages. The scientist is judged solely by the quality of his final product No one will criticize him for spending many hours on his manuscript

and carrying it through several revisions to make it as nearly perfect as possible

Unless research workers are willing to learn to write effectively each scientific or technical institution may need to have on its staff someone whose duty it is to edit and, if necessary ghost write publications on work done in the institution Few scientists however would welcome such a procedure

It may be true that the average technical specialist is unwilling or unable to write properly But this does not apply to leaders in science If the student will survey the history of science he cannot fail to note a high degree of correlation between ability in writing and achievement in science

Proficiency in writing—like skill in laboratory manipulations—can be gained through study and practice This should not be too difficult for the science student once he realizes that with practice and constant effort toward improvement he can achieve success.

Every student who is preparing for work in science should realize as early as possible that such training is a highly important part of his education In recording the results of laboratory experiments the student has abundant opportunity for acquiring this skill He should learn to write as accurately clearly and concisely as possible To make rapid improvement he should apply the knowledge he has gained in the study of English composition and should frequently consult a handbook that deals specifically with scientific writing The benefit derived from this work will be increased if each report is carefully revised before it is submitted in its final form No single factor is more important than daily practice Translating from a foreign language and reading good books slowly are also helpful.

Several meetings of the departmental seminar for graduate students might profitably be devoted to a discussion of the preparation of scientific results for publication Each member of the group could report on a phase of the subject in which he is especially interested or competent. To emphasize the points discussed, the reports should be illustrated with examples of good and of poor work selected from the current literature of the science Techniques used in preparing graphs drawings, and photographs could be demonstrated by members of the group or by other persons who have acquired skill in these arts. Visits to a printing plant and a photoengraver's shop, which may be arranged for a small party in nearly any city would give the group first-hand information on the final steps in the production of printed matter

The present guide to the preparation and writing of scientific papers should be a convenient aid to students and others engaged in scientific work. This manual is the result of a process of development and adaptation Some of the suggestions and directions that it contains were originally prepared to aid students in writing theses at the College of Agriculture of the University of the Philippines. After the suggestions had been tested in mimeographed form, they were first published as a pamphlet that was adopted as the guide for College publications and was used as a supplementary textbook in the English courses. The earlier text published under the title *Preparation of Scientific and Technical Papers*, has been thoroughly revised and largely rewritten. It is hoped that the handbook, in its new form, may continue to be of service to students in colleges and universities.

Although, in the main the directions given in this manual are for the preparation of a thesis, or dissertation, they apply also to the writing of other types of

Valuable suggestions and help have come from Miss Estelle Brodman, Prof. Frederick E. Croxton, Dr. F. E. Denny, Dr. Gordon S. Fulcher, Miss Amy L. Hepburn, Prof. Burton E. Livingston, Miss Sally MacDonald, Mr. John W. McFarlane, Prof. Edwin B. Matzke, Prof. Francis J. Ryan, Miss Margaret C. Shields, and Dr. Morris Winokur. Special thanks are due Helen M. Trelease for advice and help during the revision of the book.

New York
February 1947

papers in science, agriculture engineering and medicine, and to the preparing of manuscripts of a more popular nature on scientific or technical subjects.

Many of the rules given in this book are based upon recognised authorities, listed in the bibliography at the end of the volume. Experience in reading students' manuscripts and journal copy has been the guide in selecting the rules and in making the suggestions. Some of the directions are given to secure uniformity Two or more ways may be approved by usage but it is convenient to adopt one form.

No attempt has been made to include rules of grammar and rhetoric, though a few are mentioned as reminders. These subjects are treated in so many handbooks and textbooks of English composition that their inclusion here would be superfluous. It is taken for granted that the student will have on his desk a good handbook of composition (Woolley Scott and Berdahl's *College Handbook of Composition* or Groover and Jones's *The Century Handbook of Writing*) a dictionary of synonyms (Soule's *Dictionary of English Synonyms* Webster's *Dictionary of Synonyms*, or Roget's *Thesaurus*) and an authoritative dictionary (a large abridgment at least of *Webster's New International Dictionary*) A copy of *The Concise Oxford Dictionary* is also helpful because it gives many examples of the correct use of words and phrases

In general the style herein suggested conforms to that of the Waverly Press a printing house that has developed a high standard in scientific and technical publications

I am indebted to Professor Ronald A. Fisher and Messrs Oliver & Boyd Limited Edinburgh for permission to reprint table IV from their book *Statistical Methods for Research Workers*

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CONTENTS

Preface	v
Criteria for choosing a research problem.	1
First steps in treating scientific data	2
Outline of a scientific paper	4
Writing the paper	7
Suggestions on subject matter and arrangement	8
General.	8
Title	11
Introduction	11
Discussion of results	12
Abstract or summary	14
Logical presentation of ideas	15
Making the paper interesting	18
Use of tenses	20
Punctuation	21
Revision of the manuscript	23
Preparation of the typewritten copy	25
Correcting the typewritten copy	29
Estimating the length of the printed article	34
Kinds of type and their indication in the manuscript.	36
Capitals	38
Italics	40
Numbers	42
Reliability and significance of measurements	46
Abbreviation of units of weight and measure	50
Names of plants and animals	55
Tables	58
Footnotes	66
Use of the library for research purposes	67
Indexing and abstracting tools	74
Literature citations.	84
First method	86
Second method	90
Abbreviations of periodical publications.	91
Abstracts and quotations	97
Acknowledgments	99
Preparation of an analytical table of contents.	100

Headings in the text of a paper 101
Illustrations 103
    Correct proportions 103
    Drawings 108
    Drawings from photographs 110
    Graphs 111
    Photographs 124
    Lantern slides 132
    Preparation of illustration copy 133
    Shipping illustrations 135
Prepublication review and revision. 135
Proofreading 137
Bibliography 142
Index. 145

CRITERIA FOR CHOOSING A RESEARCH PROBLEM[1]

In choosing a research problem, special knowledge of a particular field of science is indispensable. The selection of a problem requires study, thought, and planning—guided by all the imagination, originality, and critical judgment at the command of the investigator.

Many scientists find it helpful to accumulate a list, in the form of a card index, of promising research problems from which selection may be made. It is advantageous to make a preliminary analysis of each subject, indicating briefly the object, scope, general plan of investigation and probable nature of the results that might be obtained.

The criteria given below should be useful in stimulating search and thought during the preliminary survey of possible research problems in an experimental phase of science. Although the criteria are purposely stated in the form of brief rules, it will be understood that they are to be regarded merely as hints or suggestions, which, though helpful in many cases, are obviously not universally applicable.

1. The problem should deal, usually in a quantitative way, with the relations between natural phenomena—or more specifically, with the causal conditions that control observable facts or events.

2. It should be circumscribed, definite, and specific, but should preferably lead far into the literature.

3. It should be capable of statement in the form of several hypotheses, each of which may be tested in order.

4. It should be capable of experimental treatment with

[1] Dr. Burton E. Livingston has helped in the preparation of this section.

the knowledge and facilities available, and it should give promise of yielding definite results within the allotted time.

5 It should have as its primary object the obtaining of new information in a specific field, preferably one possessing importance to the science as a whole

6 It should give promise of leading to other interesting and important problems, and prepare the investigator for handling them

7 It may test some proposition about which there is difference of opinion or one that has secured acceptance upon logically insufficient grounds

8 It should preferably deal with some relatively little-known principle, rather than with one that is better known and more thoroughly analyzed.

9 It may well treat some phase of the subject that has been relatively neglected

10 It should deal with materials well adapted to the proposed experimentation preference perhaps being given to those widely known or economically important

FIRST STEPS IN TREATING SCIENTIFIC DATA

1 *Tables* Check all calculations and put experimental data in the form of tables (See section on "Tables," page 58.) Make all calculations twice preferably on different days, and if practicable by different methods. The second calculation should be made without reference to the first, and on a new page in your notebook. Notes on observational and descriptive work should be arranged and classified

2 *Graphs* Plot your data wherever possible (See section on "Graphs" page 111) In most experiments

tion, graphs furnish the best means of bringing out relations among data, and should be prepared to aid in interpretation even if they are not to be published

3. *Conclusions.* Examine the tables, graphs and classified notes for conclusions and relations. Ask yourself "What are the possible explanations of the facts?" If several explanations seem equally probable do not emphasize only *one* Consider all logical possibilities. Make written notes of tentative conclusions If time is available verify your conclusions by gathering more data or by making special test experiments confirm your conclusions, if possible by evidence from sources that are entirely different in character Estimate the probable accuracy of your results by considering the sources of error Conclusions from your results must be based upon a careful consideration of their accuracy and sufficiency If you have enough data, use statistical methods to estimate their probable significance (See section on "Reliability and Significance of Measurements" page 40)

4. *Revision of conclusions.* Refer again to your data to see whether your tentative conclusions are actually justified. Discover in which cases these conclusions apply and in which, if any they do not. Modify if necessary the statement of your conclusions and see whether they are consistent with established facts or principles pertaining to the subject

5. *Exceptions.* Examine the data for exceptions inconsistencies, discrepancies and anomalies. Record the exceptions, and check their values Some of the most important scientific discoveries have resulted from apparent exceptions and abnormalities in data

Formulate possible explanations for the exceptions. Study your conclusions again to see how the exceptions modify them.

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literary devices should be subordinated if they interfere with clearness. The plan should be self-evident throughout the composition.

2. *General outline.* The outline given below suggests a form that may be used for a wide variety of scientific papers. An examination of the papers published in scientific journals will show that the majority of them have this general arrangement and sequence of topics. This form of outline is suitable for most scientific papers that report investigations or experiments and possesses the additional advantage of being familiar to the reader. The outline should be modified sufficiently to adapt it to the special requirements of the article that is to be written.

General outline of a scientific paper

TITLE. The title should consist preferably of few words, indicative of the contents that are most emphasized. Great care must be exercised to employ words that contain the elements both of brevity and comprehensiveness and permit of easy and accurate indexing.

ABSTRACT. The abstract is a brief condensation of the whole paper.

I. *Introduction.*
- A. Nature of the problem. Its state at the beginning of the investigation.
- B. Purpose, scope, and method of the investigation.
- C. Most significant outcome of the investigation; the state of the problem at the end of the investigation.

II. *Materials and methods.*
- A. Description of the equipment and materials employed.
- B. Explanation of the way in which the work was

6. *Written notes.* It is advisable to record on paper all the ideas that occur to you The mechanical process of preparing a paper is a matter of mere detail subject to endless variation. Some writers like to use a standard size of cards (5 by 8 inches) for all preliminary work on a paper The cards may be filed in a box, under appropriate headings. Only one topic is put on a card and this topic is expanded later to make a paragraph This method allows topics to be added, eliminated, and rearranged whenever necessary Other writers prefer to use sheets of paper of standard size (8½ by 11 inches) putting only one topic on a sheet and filing the sheets in folders, large envelopes, or loose-leaf notebooks. (Original observations and measurements are usually recorded in a notebook with permanent pages. A copy should be put in a safe place as soon as possible)

OUTLINE OF A SCIENTIFIC PAPER

1 *Nature of scientific writing* A paper on a scientific or technical subject necessarily consists of (*a*) a report of facts, (*b*) an interpretation of facts, or (*c*) a combination of a report and an interpretation. The method of writing is governed by many conditions, including the nature of the subject the purpose of the article the characteristics of the writer and the interests of the probable readers Obviously, no set method or arrangement will be suited to all kinds of papers

It is important that the plan of the composition be made very clear to the reader The main topics and their subdivisions should be plainly indicated In this respect scientific writing differs from literary composition A scientific paper is intended to be studied and used as a reference, it is not merely to be read Hence,

- C. Experiments and results.
- D. Discussion of results.

V. *Descriptive title of third series of experiments.*
- A. Introduction.
- B. Materials and methods.
- C. Experiments and results.
- D. Discussion of results.

VI. *General discussion.*

Outline of an engineering report

TITLE.

ABSTRACT. Condensed account of object of work, significant results, general conclusions, and specific recommendations.

I. *Introduction.* Definition of problem, object of investigation.

II. *Apparatus and materials.*

III. *Method.* Procedure and processes.

IV. *Results.* Tabulations, graphs, and description.

V. *Discussion of results.* Explanation and significance of results together with evidence shown by data.

VI. *Appendices.* Calculations, technical data.

WRITING THE PAPER

1. *Mechanical process.* There probably is no best way to prepare a scientific paper except as may be determined by the individual writer and the circumstances. With no notes at all one might be able to start writing an article which, short or long, would be practically finished at every stage, or one might accumulate the facts in a great mass of verbiage and then compress the paper to the required limit. It is the end product that counts, not the intermediate steps.

done. (Give sufficient detail to enable a competent worker to repeat your experiments. Emphasize the features that are new)

III *Experiments and results*
- A. Description of the experiments
- B Description of the results. (If possible these should be shown in tables and graphs.)

IV *Discussion of results*
- A. Main principles causal relations or generalizations that are shown by the results. (Choose one or several main conclusions which your evidence tends to prove)
- B Evidence (as shown by the data) for each of the main conclusions
- C Exceptions and opposing theories and explanations of these
- D Comparison of your results and interpretations with those of other workers

Outline of a paper that includes several series of experiments which it is advantageous to present separately

TITLE.

ABSTRACT

I. *General introduction*

II. *General materials and methods*

III. *Descriptive title of first series of experiments*
- A. Introduction
- B Materials and methods.
- C Experiments and results.
- D Discussion of results.

IV *Descriptive title of second series of experiments*
- A. Introduction
- B Materials and methods.

Each paragraph should have unity It may well begin with a topic sentence that indicates the idea to be developed in the paragraph The use of topic sentences aids the writer in transforming his preliminary outline into paragraphs and it helps the reader who looks through the paper for its salient contents.

2. *Orderly arrangement of topics* Choose a logical sequence of topics based upon a careful analysis of the subject matter The order may be determined by relations of space time importance similarity or contrast complexity or cause and effect. Use an order that serves best the needs of clearness coherence and emphasis. Discuss similar points in the same order and use similar forms of expression. Indicate clearly the beginning of each new topic

3. *Development.* Develop the main ideas until they are clear enough to be easily understood by the reader For the sake of brevity in publication it is usually necessary to address the paper to specialists in the particular field, rather than to the general reader Use the style of the textbook—not that of the laboratory notebook. Present the material in a manner that will enable the reader to grasp it as quickly and easily as possible Explain each topic clearly point by point. Define explain, illustrate prove and summarize your statements, if necessary Give considerable thought to the relative importance of the various topics and their need of development. Treat briefly those topics that are too simple to require detailed explanation. Develop fully the more complex and the more important topics. Achieve completeness and clarity without sacrificing conciseness.

4. *Examples.* Illustrate the meaning of general or abstract statements by giving examples particular instances concrete data, amplifying details, or specific comparisons

2 *Preliminary outline* Most writers obtain best results by developing a preliminary outline before they start writing The following steps may be employed

(a) Prepare a brief outline of the topics to be treated in your article This outline may be on a single sheet of paper

(b) Make a second, enlarged outline showing an analysis, by headings and subheadings, of the article This may be three or four times as long as the first.

(c) Prepare a third outline before beginning the actual writing In this outline the topics should be shifted to the most effective order, and each topic should be enlarged and preferably expressed in the form of a concise topic sentence

(d) Begin the actual writing Spread out before you the outline, the tables and the graphs. Expand each topic or topic sentence of the outline into a paragraph. Make a rough draft first Concentrate on the subject matter and write as rapidly as possible without letting details of language interrupt the flow of ideas. Then on another day examine critically what you have written and begin to revise it (See section on "Revision" page 22.)

SUGGESTIONS ON SUBJECT MATTER AND ARRANGEMENT

GENERAL

1 *Unity* A scientific paper should be a unit, treating a single definite subject it may contain several main topics if these are logical divisions of one large subject. *Make a careful* selection of materials. Include only what is necessary to an understanding of the main ideas, but omit nothing that is essential.

TITLE

1. *Choice of title.* Choose a concise descriptive title, complete enough to include the main topics needed for making a subject index in an abstract journal. Select these topics with the aim of giving definite ideas as to the exact contents of your paper. In a biological study it is desirable to give the name of the organism in the title. If necessary sacrifice brevity in order to include all important nouns under which your paper should be indexed. Place the more important words near the beginning of the title.

2. *Selection of topics.* Ask yourself "Under what topics would I naturally look in a subject index of an abstract journal if I were searching for the literature on the subjects treated in my paper?" The answer to this question will provide the topics for your title.

INTRODUCTION

1. *Content.* The function of the introduction is to make clear the subject of the article. The introduction should state the problem, describe its condition at the beginning of the study and tell the reasons for investigating it. It should give the purpose, scope and general method of the investigation.

Finally the introduction should state clearly and definitely the most significant result of the investigation. With the main conclusion before him at the start, the reader is able, as he goes through the paper, to judge the development of evidence and inference brought forward in its support. If, on the other hand, the statement of the main point is deferred until late in the paper, the reader is unable to distinguish essential from non-essential evidence and may overlook or forget important features.

5 *Answers to reader's questions.* Consider what questions the reader will wish answered in your article Always keep in mind the fact that the primary purpose of your paper should be to give the reader valuable information and new ideas.

6 *Topics of general interest.* Develop fully the topics that are of interest to many readers.

7 *Words* Employ words that are approved by good usage. Be careful to avoid those that are obscure ambiguous or inappropriate Consult *Soule's Dictionary of English Synonyms* or *Webster's Dictionary of Synonyms* when at a loss for the word or expression that most precisely fits your thought, and turn to *The Concise Oxford Dictionary* when in doubt regarding the idiomatic use of common words With a large vocabulary at your command one word may take the place of several in making your meaning clear Try to use words that a foreigner will be able to find in a small dictionary (For example, a foreigner might not be able to find the meaning of the word 'tumbler but he would understand if you described it as a "cylindrical glass vessel, 7 cm in diameter and 10 cm. deep")

Define all technical terms that the reader might not understand

8 *Tone* Skill may be developed in presenting material in a tactful way Clear statements supported by evidence are better than positive assertions. Avoid pedantic or pompous language Be careful also not to announce a well known fact as if it were a discovery Indicate clearly which of your results and conclusions are new For completeness of discussion it is often necessary to mention to the reader many things that he already knows but this may be done skillfully without annoying or confusing him.

TITLE

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Finally the introduction should state clearly and definitely the most significant result of the investigation. With the main conclusion before him at the start, the reader is able, as he goes through the paper to judge the development of evidence and inference brought forward in its support. If on the other hand, the statement of the main point is deferred until late in the paper the reader is unable to distinguish essential from non-essential evidence and may overlook or forget important features.

2 *Pertinent literature* Cite in the introduction only those literature references that bear directly upon the introduction itself The other references to the literature should be included in the parts of the paper to which they are most pertinent, chiefly the discussion of results.

The foregoing procedure is now favored by most writers To be sure, a long historical review—often arranged merely chronologically—was at one time considered to be an essential part of the introduction But the reader generally finds such a review dull since he is not prepared so early in the paper to correlate past investigations with the specific problem in hand The place for most of the literature references is in the discussion of results, where the new results and interpretations are compared with those of previous investigators

DISCUSSION OF RESULTS

1 *Interpretation.* Show the meaning of the observed facts, their interrelations their underlying causes, their effects, and their theoretical implications. Aim, where possible, to explain facts in the symbols or language of mathematics and according to the laws of physics and chemistry

2. *Reference to tables and graphs* Keep the text free from mere repetition of the detailed data presented in the tables and graphs Such repetition except when necessary to show comparisons not obvious in the tables and graphs, confuses the text and makes dull reading As far as possible, the text should be reserved for comparisons, relations conclusions, and generalizations

3 *Unsettled points* Give particular attention to evidence that bears on points concerning which there is difference of opinion among scientists. But avoid personal or controversial language or expressions likely to

excite controversy or retort Above all do not impugn the motives of others motives are irrelevant.

4. *Emphasis of general conclusions.* Indicate the ways in which the results of your study are related to the science as a whole Emphasize the additions that it makes, and stress conclusions that modify in a significant way any hypothesis, theory or principle that has secured general acceptance Develop with special clearness observations or inferences that seem to be of sufficient importance to deserve mention in a textbook on the subject

5. *Qualification of conclusions.* To prevent misunderstanding, it is necessary to define as clearly as possible the precise conditions to which your conclusions apply A conclusion should always be stated in such a way as to indicate its range of validity

Confusion often results from failure to define adequately all influential experimental details. In any experiment or series of experiments the influential conditions may be analyzed conveniently into two groups (1) those representing the variables specially studied, and (2) those representing the rest of the experimental complex—the influential background or prevailing conditions. The conditions of the first group are assumed to be adequately known and controlled they are the conditions that are purposely made to differ in certain known ways. For an ideal experiment or experiment series the conditions of the second group should be as thoroughly known and definitely described as are the primary variables they should be maintained constant or at least not permitted to vary sufficiently to interfere with the influence of the primary variables.

6. *Applications.* Indicate the practical applications of your study to agriculture industry engineering, medicine etc.

7 *Stimulation.* Try to stimulate the reader to further thought and research on the subject of your investigation

ABSTRACT OR SUMMARY

1 *Position and designation.* Two practices are followed in the various journals (*a*) One is to print an *abstract* (often in distinctive type and without heading) at the beginning of the article just below the title, where it is most convenient *for readers. The modern trend in* scientific and technical journals is toward the adoption of this method. (*b*) The other procedure is to print a *summary* (under this heading) at the end of the article.

This abridgment should be the same in content, whether it is designated as an abstract or as a summary

2 *Purpose* In preparing a title and abstract for an article it is important to realize that the individual worker *glances at many more articles than he has time to read.* A title is necessarily short but should be as informative as possible In cases where the worker is uncertain from the title alone whether the article contains material of interest to him the abstract is there to help him by telling him more precisely what the article covers. Also in cases where he is interested only in the main results and conclusions the abstract gives him this information in brief form and saves him the difficulty of reading the article

The abstract fills a gap between the title which may average only about ten words, and the article which may be ten pages long It is useful to readers who wish more information than is given by the title and less information than is given by the article Its purpose then is to assist readers (*a*) by elaborating the title and (*b*) by condensing the article thus saving the time of readers who do not require the full contents of the paper Incidentally if the abstract is well prepared by the author, it will be suitable for reprinting in an abstract journal

3. *Nature.* To serve its purpose the abstract should indicate clearly all the subjects dealt with in the article so that no reader interested in only one of these subjects will fail to have his attention directed to it. The abstract should also summarize briefly but clearly the principal new results and conclusions especially all new information likely to be of interest to readers who are not specialists in the field. The abstract should be well written, so as to be easily read and understood, and should be self-explanatory complete and clear in itself

4. *Preparation.* Keeping in view the dual purpose of the abstract, the writer should read his manuscript carefully making notes (*a*) as to the subjects dealt with, particularly subjects concerning which new information is given incidentally and (*b*) as to the new results and conclusions reported. Material relating to each subject should then be gathered together sentences summarizing the material should be written and finally these sentences should be put together so as to make a well-written abstract—brief condensed, complete, yet readable

5. *Models.* It will be useful to study as models the abstracts given in abstract journals and to try to make abstracts which would be acceptable to such journals.

LOGICAL PRESENTATION OF IDEAS

Many of the mistakes in scientific papers involve errors in logic. Their avoidance depends chiefly upon a thorough understanding and careful analysis of the ideas that are presented.[8] The following rules apply to some of the most obvious and yet commonest, mistakes of this type

[8]However skeptical one may be of the attainment of universal truths, one can never deny that philosophic study means the habit of always seeing an alternative, of not taking the usual for granted, of making conventionalities fluid again, of imagining foreign states of mind. In a word, it means the possession of mental perspective. —William James.

1 *Requisites of a good hypothesis.* Is it new? Is it worthy of consideration? (*a*) Do not present as new a hypothesis that really is old But defective hypotheses may be improved, and presented as modified hypotheses (*b*) The hypothesis should give promise of explaining facts or relations that have not hitherto been explained. (*c*) The hypothesis should be consistent with itself and with well-established facts and principles (*d*) Do not stress one hypothesis when another or others, would fit the facts equally well Employ the method of multiple working hypotheses (*e*) Do not give a complex hypothesis when a simpler one would fit the facts equally well (*f*) It is rarely useful to propose a hypothesis that cannot be tested or verified (*g*) The hypothesis should aid the prediction of new facts or relations.

2 *Illusions.* (*a*) Be careful not to draw conclusions from data involving errors of observation errors in arithmetic, compensating errors systematic and personal errors. (*b*) Do not use mathematical formulae without clearly understanding their derivation and all the assumptions involved (*c*) Be cautious in comparing conclusions based upon experiments in which the influential conditions have been improperly controlled and therefore not duplicated (*d*) Guard against drawing an illogical conclusion. (*e*) Avoid confusing facts with opinions or inferences not only in the investigation itself but also in preparing results for publication

3 *Too broad generalization* (*a*) Do not draw a conclusion from too few data, nor too broad a conclusion from a limited series of data (*b*) Be careful in drawing conclusions that are based on extrapolated curves. (*c*) Guard against failing to qualify a conclusion so as to show the limits within which it applies or the variation which is to be expected (*d*) When you indulge in speculation,

be sure that you and your reader know that it is specu lation.

4. *False relation between cause and effect.* (a) Do not infer merely because one thing has followed another that it is the effect of the other. (b) Do not argue that causes are the same because identical or indistinguishable effects have been observed. A certain phenomenon may have one cause in one case and another cause in a second case. (c) Be careful in making inferences by analogy. If two cases resemble each other in certain particulars, it is not safe to infer resemblance in another particular that has been observed in only one of them. (d) If two processes have the same mathematical expression (or yield the same sort of graph when plotted) it does not necessarily follow that the processes themselves are essentially alike.

5. *Prejudice.* (a) An attitude of intellectual honesty and devotion to truth is the foundation of scientific work. (b) Guard against prejudice: do not be influenced by preconceived opinions. (c) Do not decline to admit evidence because it necessitates an unwelcome conclusion. If a conclusion is unwelcome, it is a sign of a wrong mental attitude. (d) Biting caustic comments are almost sure to be regretted later and they invariably weaken the effect of one's arguments.

6. *Ambiguity of terms.* (a) Guard against misunder standings of language. (b) Define terms as clearly and precisely as possible. Do not use technical terms, especially in a field not strictly your own, unless you are certain of their precise meaning, or unless their use has been checked by a specialist in the field. (c) Do not use a term in one sense in one part of your reasoning and in another sense in another part. (d) Do not mistake a general for a specific use of a term. (e) Be very critical of statements containing the words *cause determine*

control influence result, effect. Distinguish carefully between such words as *force, agency, process*

7 *Missing the point.* (*a*) Do not ignore the question evade the issue or argue beside the point. Define clearly the points at issue Try to determine the crucial point that will really decide the discussion. (*b*) Guard against reasoning that may correctly prove something but not the thing which you think it proves

8 *Begging the question* (*a*) Do not base a conclusion on an unproved proposition. (*b*) Avoid arguing in a circle—drawing a conclusion that merely states the assumptions in other words (*c*) Do not assume the truth of a proposition that is not proved and may be false (*d*) Do not assume that a certain thing is true because a prominent authority has said it is true (*e*) Do not assume that a proposition is untrue because you are able to disprove the arguments that have been used to support it there may be other valid arguments that make it true.

MAKING THE PAPER INTERESTING

A mastery of the devices for attracting and holding the interest of the reader must be acquired by the writer of articles of a popular nature. These methods should of course be used cautiously by the writer whose purpose is to inform, rather than entertain, his fellow workers in science. Rather let your style be characterized by unobtrusive simplicity than by inappropriate and labored ornamentation. Content is more important than style. The author should be more interested in the thing he is describing than in the words with which he describes it. Nevertheless, judicious use of some of the devices of the journalist may serve without breach of propriety to

give a scientific paper an attractive and interesting style. These devices include

1 Beginning with a broad introduction that gives the reader the information necessary for an understanding and appreciation of the subject. Referring to the ways in which your subject may be related to the reader's previous knowledge or experience and suggesting benefits to be derived from further information on the subject. Emphasizing the economic or practical importance of the subject.

2. Making the paper as easy as possible for the reader to comprehend.

3. Using photographs, drawings, charts diagrams and curves.

4. Linking each part of the paper with some preceding part by transitional words phrases, or sentences so as to make a continuous story—thus sustaining the reader's interest

5. Omitting tedious details that are not essential for accuracy and completeness keeping the text free from repetition of data presented in tables and graphs

6. Emphasizing the new and the unusual—the features that have "news value.

7 Preceding every dull passage by a stimulating introduction.

8. Using colorful words and vigorous turns of expression.

9 Using forcible analogies, comparisons or resemblances similes and metaphors.

10 Introducing striking or unexpected statements, contrasts and paradoxes.

11 Asking provocative questions.

12. Leading the reader to feel that he is doing his own thinking—not merely following stimulating his imagination and giving him a sense of achievement.

USE OF TENSES

1 *Experimental facts* The experimental facts should be given in the *past tense* (For example The plants *grew* better in A than in B the dry weight *was* greater in A than in B)

2 *Presentation* The remarks about the presentation of data should be mainly in the *present tense* (For example Diagrams showing yields *are* shown in figure 3 The second column of table 2 *represents* the dry weight of tops.)

3 *Discussions of results* Discussions of results may be in both the *past* and *present tenses* swinging back and forth from the experimental facts to the presentation (For example The highest dry weight *is* shown for culture A, which *received* the greatest amount of the ammonium salt. This may mean that the amount of nitrogen added *was* the determining condition for these experiments)

4 *Specific conclusions* Specific conclusions and deductions should be stated in the *past tense* because this always emphasizes the special conditions of the particular experiments and avoids confusing special conclusions with general ones (For example Rice *grew* better under the other conditions of these tests when ammonium sulphate *was* added to the soil Do not say Rice *grows* better when ammonium sulphate *is* added to the soil)

5 *General truths* When a general truth is mentioned, it should of course, be stated in the *present tense*. Logically, a general truth is without time distinction For example, one may say Many years ago scientists were convinced that malaria *is* caused by a germ carried by a certain species of mosquito General conclusions, well established principles of mathematics physics and chemistry should be put in the *present tense*

PUNCTUATION

Punctuation should follow current usage and should be uniform throughout an article It is better to learn to apply a few simple rules than to puzzle over each case as a separate problem. The following general rules are among those most frequently applied.[1]

1 *Coördinate statements.* Put a comma before a complete statement introduced by *and* *but* *for* or *nor* or *neither* A semicolon or a period should be used if the statements are long or complicated.

2. *Statements introduced by conjunctive adverbs* Put a period or a semicolon—never a comma—before a complete statement introduced by *however* *yet*, *still*, *nevertheless* *therefore* *so* *hence* *moreover* *further* *accordingly* *besides*, *also* *thus* *then* *indeed* *otherwise*

3. *Series of coördinate elements.* A comma should precede *and* in a series of coördinate elements such as *a*, *b* *and* *c*, in which the elements may be words or phrases.

4 *Adverbial clauses* When an adverbial clause precedes its principal clause separate the two clauses by a comma. But a comma is usually unnecessary when the adverbial clause follows Adverbial clauses are introduced by *when* *after* *while* *if* *although*, *since* *because* *unless* etc

5 *Relative clauses* A non-restrictive relative clause which is merely explanatory of an antecedent should be set off by commas A restrictive relative clause (omission of which would change the meaning of the sentence) should not be set off by commas Relative clauses are

[1] Also consult one of the handbooks of composition, such as Woolley Scott, and Berdahl's *College Handbook of Composition* or *The Century Handbook of Writing* A complete system of punctuation, which editors find extremely helpful, is contained in Woolley's *The Mechanics of Writing*

generally introduced by *that which, who,* or *whose* Similar rules apply to phrases.

6 *Erroneous junction* Use a comma to separate two parts of a sentence that might be erroneously joined in reading

7 *Interpolated elements* Set off with commas, dashes, or parentheses an interpolated element that would make the meaning of the sentence obscure if no punctuation were used

REVISION OF THE MANUSCRIPT

After writing the first draft of your paper, begin to revise it Revise several times having one principal object in mind each time Learn to rewrite between the lines In making corrections, insertions and transpositions, follow the methods given on pages 30 to 33 If there is not enough space between the lines for a revision, a convenient method is to write the revised passage on a slip of paper of page width and to staple this to the margin of the manuscript page The pages need not be copied until they have become crowded with corrections

1 *Organization and consistency* In the first revision give attention to the order and development of the larger divisions of the paper—the sections and paragraphs The order of the topics may need to be shifted though this should not be necessary if a well-prepared analytical outline has been followed If the paper is long, the first part may have to be rewritten to make it consistent with the last part. Irrelevant parts should be eliminated. Important parts may be expanded and minor parts subordinated.

2 *Sentences* In the next revision of the rough draft of the manuscript focus attention on the sentences

Many of these may need to be revised, because they may have been written hurriedly without much concern about details of form. Study and revise the sentences in groups, rather than singly. Make each group of sentences develop the exact ideas you wish to express. See that the members of the group stand in logical relationship to one another. Achieve good organization of sentences through careful revision.

The following brief rules suggest helpful procedures. (*a*) Use short sentences—rarely allowing them to exceed thirty words in length. (*b*) Choose sentence structures that require only simple punctuation. (*c*) Prefer the normal order of subject, verb, and object. (*d*) Prefer the active voice of verbs. (*e*) Keep the same subject and the same voice and use parallel structure. (*f*) Transpose misplaced words or phrases. (*g*) Insert connectives and other reference words to show relationships. (*h*) Correct weak or vague reference of pronouns to their antecedents. (*i*) When advantageous, convert a loose compound sentence into a complex sentence with a subordinate clause.

3. *Clearness.* Revise sentences and paragraphs with special attention to clearness. There should be only one possible meaning, and this should be easily understood by the reader. Find the right word or phrase to convey your idea.

4. *Conciseness.* As a rule, the first draft of a paper should be longer and more complete than the copy that will be offered for publication. Better results are usually obtained by condensing a long paper than by expanding a short one. In shortening a paper, condense or eliminate the parts that are least needed for clearness of presentation. Strike out idle words (especially superfluous adjectives and adverbs), replace a phrase with a word, combine related sentences, eliminate repetition of an idea. Omit

the obvious and the least important. Retain the essentials. Impartial counsel is valuable in aiding you to decide what is essential In judging, put yourself in the place of the reader It takes moral strength to "blue pencil" choice phrases, sentences, or paragraphs. But the results will justify the effort

5 *Repetition* Eliminate frequent repetition of the same sentence structure, or of the same word, particularly if close together and with different meanings

6 *Connectives.* Give special attention to connectives *and or similarly but, however nevertheless, therefore when where since because although if etc*

7 *Euphony* Revise to make the article pleasing in sound when read aloud

8 *Punctuation* Correct the punctuation

9 *Style* Revise with special attention to consistency in the use of capitals and italics and in the style of headings Consistency in these matters as well as in punctuation and spelling is essential in a manuscript prepared for the printer's use The printer cannot depart from the rule to "follow the copy

10 *Accuracy* Read through the manuscript carefully searching for inaccuracy or exaggeration of statement.

11 *Length of printed paper* A paper may need to be shortened or divided to meet the limit specified by the journal in which it is to be published. (See section on "Estimating the Length of the Printed Article" page 34) A long paper may often be divided into two or more short papers and these may be published separately Care should be taken however to make each paper a unit treating one central topic If there are two or more topics in a paper these must be the logical subdivisions of a single large topic.

Check list of some common errors in writing

A. *Inaccuracy*

1. Misstatement or exaggeration of fact.
2. Misrepresentation through omission of facts.
3. Errors in data, terms, citations.
4. Conclusions based on faulty or insufficient evidence.
5. Unreliable mathematical treatment.
6. Failure to distinguish between fact and opinion.

   Contradictions and inconsistencies

B. *Inadequate presentation*

1. Omission of important topics.
2. Faulty order of sections or of paragraphs.
3. Inclusion of material in wrong section or paragraph.
4. Incomplete development of a topic.
5. Failure to begin a section or a paragraph with a topic sentence.
6. Weak beginning of a section or a paragraph.
7. Inclusion of irrelevant or tedious details.
8. Passages that are dull or hard to read.
9. Failure to distinguish between the new and the well known.
10. Inadequate emphasis of interpretation and conclusions.

C. *Diction and style*

1. Long sentences (more than 3 or 4 typewritten lines) and complicated grammar.
2. Weak sentence beginnings—a string of weak or meaningless words.
3. Lack of clearness—a sentence that requires rereading to get the meaning.
4. Long, complicated paragraphs (more than ½ page of typewriting).

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script, including footnotes legends and literature citations. Exception is made only in the case of a table that must be single-spaced in order to make it fit the page

White paper of standard size (8½ by 11 inches) and ordinary weight (16 pounds) should be used.

6. *Number of typewritten copies.* Three typewritten copies should usually be made The author should retain one fully corrected carbon copy The original copy (from the ribbon) should always be sent to the publisher since a carbon copy is easily erased and may become illegible Some journals require in addition to the original typewritten copy one or more carbon copies for examination by the editorial board.

7 *Margins.* There should be a blank space of about 2 inches above the title on the first page 1 inch at the top of the other pages and 1 inch at the bottom of each page. There should be a blank margin of 1½ inches at the left side of each page and about 1 inch at the right side (but avoid dividing words at the ends of lines)

8. *Page numbers.* The pages of the typewritten copy should be numbered consecutively preferably in the upper right-hand corner

9 *Models of style* The author should make a careful study of the journal in which his article is to be published, and he should prepare his copy so that it conforms to the best practice illustrated by current issues of the journal. Only carefully prepared, clearly typewritten manuscripts are acceptable.

10 *Directions for proofs.* The author's name and the address to which proofs are to be sent should be typewritten near the top of the first page of the manuscript and enclosed in a circle

11 *Title of the paper* The full title of the paper including the author's name should be typewritten 2

5 Wordiness and padding—failure to come directly to the point
6 General words rather than definite words
7 Dull weak or awkward expressions
8 Unnecessary repetition of the same word or the same sentence structure
9 Omission of relation words especially in short sentences
10 Unnecessarily technical language or too many strange words in a single sentence

PREPARATION OF THE TYPEWRITTEN COPY

1 *Copy for typist* Copy for the typist should be clearly written All of the sheets should be of the same size preferably numbered in the upper right hand corner

2 *One side of paper* Write on only one side of the paper

3 *Flat* Never roll a manuscript If possible, keep it flat but when necessary it may be folded.

4 *Clips* The sheets should be fastened together with clips which can be removed easily

5 *Typewritten manuscripts* The manuscript should be typewritten with a machine having clean type and a fresh, well-inked black ribbon. A typewriter with Pica characters (10 to the inch) places less eyestrain upon all who work on the manuscript than one with small Elite characters (12 to the inch) The type should be kept clean the carbon paper should be renewed frequently (usually after using for not more than eight pages) and the ribbon should be changed as soon as the original copy becomes perceptibly lighter than the copy made with fresh carbon paper

Double-spacing must be used throughout the manu

Footnotes should not be typewritten with the text but should be put on separate sheets (as many footnotes as convenient being written on a sheet) these should be placed at the end of the text copy after the literature cited.

The literature citations should begin on a new sheet.

The legends, or titles, of plates and figures should be written in numerical order on one or more sheets, and these should be placed after the footnotes.

18. *Condensed title for running headlines.* A condensed title of 35 letters or less should be given by the author for the running headlines of the pages. This may be placed on a separate sheet at the end of the manuscript.

CORRECTING THE TYPEWRITTEN COPY

After the manuscript has been typed, the author should read the typewritten copy for errors. All tables, figures names, quotations, and citations in the copy must be verified by comparison with the original manuscript. A convenient method of checking is to have another person slowly read aloud from the original while you follow and correct the typewritten copy

Assume that errors are present find and correct them. The responsibility for uncorrected errors in figures, names, citations, and quotations rests entirely with the author since the publisher has no means of discovering such errors. It is fatal to leave them for critics to discover after the paper has been published.

The typewritten manuscript must be clear and legible as well as correct. Symbols, signs superscript letters and figures etc., must be unmistakable. For example the symbol "Cl" (for chlorine) must be marked with a handwritten "l" above it to show that it is not "C1 since the

inches from the top of the first page of the manuscript.[4] The following example shows a complete heading that may be modified to suit the style of almost any journal.

[Example of general heading]

INFLUENCE OF SULFONAMIDES ON GROWTH AND RESPIRATION IN BACTERIA[1]

HENRY E. MILLER AND JOHN C STEWART

Department of Bacteriology School of Medicine University of Pennsylvania Philadelphia 4 Pennsylvania

Received for publication August 12, 1946

[1] The authors are indebted to Dr Edward M. Johnson for helpful suggestions during the course of the study

12 *Tables footnotes citations headings legends* See special directions for typewriting tables (page 58) footnotes (page 66) citations (page 84) headings (page 101) legends (page 134)

It is essential that the manuscript be prepared in a way that will allow economical composition on a typesetting machine The machine cannot compose two sizes of type in one operation *To permit rapid work, the manuscript* should be arranged so that material to be printed in small type may be separated easily from the text

Each individual table and each quotation exceeding five lines should be typewritten on a separate sheet of paper these pages should be numbered consecutively with the text pages.

[4] The author's complete mail address should be printed in the paper so that readers can request reprints It is most convenient if given on the first page of the paper in the heading or in a foot note to the title

6. *Substitution.* To replace one word by another cancel the first word by drawing a horizontal line through it, and write the new word immediately above. Never write the new word directly upon the first.

7. *Indenting a paragraph.* When a word should begin a new paragraph, place the "¶" sign immediately before the word.

8. *Canceling a paragraph.* To cancel a paragraph division, write "No ¶" in the margin, and draw a "run-in" line from the indented word to the last word of the preceding sentence.

9. *Period.* A period may be indicated clearly by enclosing it in a small circle.

10. *Space between words.* To separate two words that have been written together draw a thin vertical line between them.

11. *Canceling space between words.* To indicate that two words are to be brought together connect them by means of half-circles above and below them. (For example Foot⁐note.)

12. *Reduction of capital letter.* To indicate that a capital letter should be printed as a small (lower-case) letter draw through it an oblique line sloping downward from right to left.

13. *Italic capitals.* Four lines under a letter or word indicate printing in *ITALIC CAPITAL* type.

14. *Capitals.* Three lines under a letter or word indicate printing in ROMAN CAPITAL type.

15. *Small capitals.* Two lines under a letter or word indicate printing in SMALL CAPITAL type.

16. *Italics.* One straight line under a letter or word indicates printing in *italic* type.

17. *Bold-face.* One wavy line under a letter or word indicates printing in **bold-face** type.

typewriter uses the same symbol for both the letter "l" and the figure 1 and the multiplication sign "×" must be plainly marked or the words multiplication sign written in the margin, to distinguish it from the letter "X" Greek letters or other unusual characters should be written clearly and, if necessary explained by marginal notes An ordinary dash (em dash) should be typewritten as two hyphens without space before between, or after them If a hyphen occurring at the end of a typewritten line should be printed as a hyphen, mark it =

CORRECTIONS

1 *Corrections in body of manuscript.* If possible write corrections in the body of the manuscript, not in the margin. If corrections are written in the margin it will be difficult to make necessary transpositions by cutting and pasting Do not destroy legibility by writing too many words between the lines When it is necessary to reconstruct a long sentence or a paragraph typewrite the revision upon a separate slip of paper of page width and paste this directly over the section rewritten.

2. *Corrections horizontal.* Write corrections horizontally on the page

3 *Corrections above line* Place the corrections in the space above the line to which they apply so that the printer will see them before he reaches the words concerned.

4 *Cancellation* To cancel a word draw a horizontal line through it. To cancel a single letter draw a vertical line through it

5 *Restoration.* To restore a word that has been canceled by mistake rewrite the word above the one you have canceled or make a series of dots under the word and write Stet in the margin.

6. *Substitution.* To replace one word by another cancel the first word by drawing a horizontal line through it, and write the new word immediately above Never write the new word directly upon the first.

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17. *Bold-face* One wavy line under a letter or word indicates printing in **bold-face** type

typewriter uses the same symbol for both the letter "l" and the figure '1 and the multiplication sign "×" must be plainly marked or the words "multiplication sign" written in the margin, to distinguish it from the letter "x" Greek letters or other unusual characters should be written clearly and if necessary explained by marginal notes. An ordinary dash (em dash) should be typewritten as two hyphens, without space before between or after them. If a hyphen occurring at the end of a typewritten line should be printed as a hyphen mark it "="

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TRANSPOSITIONS

Transposition by cancellation and insertion. To transpose words, cancel them and insert them in the proper place by one of the methods just given.

RENUMBERING PAGES

Consecutive page numbers. The methods given above refer to insertions and transpositions made in the preliminary drafts of an article.

Before the manuscript is submitted to an editor or sent to a printer all the material must be in proper sequence on full sized sheets that are numbered consecutively.

Insertions and transpositions may be made by cutting and pasting. If smaller sheets were included with the manuscript, they might become separated and lost. The pages may be renumbered by canceling the original numbers and writing the new numbers near the canceled ones. It is not necessary to have the manuscript pages filled with typewriting: the printer will not leave a space if the lower part of a manuscript page contains no writing.

FINAL REVISIONS

1. *Finished manuscript.* The author is expected to make all final revisions in the typewritten manuscript. Only genuine errors may be corrected in the proofs. Alterations in the proofs are expensive and are likely to introduce inconsistencies and new errors.

2. *Corrections in manuscript.* A manuscript in which there are no corrections often indicates a careless author. If the changes are not too many and are made clearly, it will not be necessary to rewrite the pages.

3. *Order of material.* Before sending your manuscript to a publisher be sure to have all parts in the proper order as outlined below:

INSERTIONS

1 *Brief insertions.* To insert one word or a few words write them above the line and indicate the place for their insertion by a caret (^) placed below the line.

2 *Permissible method* To insert a passage of several lines in a page of an initial draft of the manuscript, the following method may be used Suppose the insertion is to be made in page 12 of the manuscript. The passage to be inserted should be written on a fresh slip of paper of page width. Mark this "A, Insert in page 12" and draw a circle around the passage In the margin of page 12 write "Insert A," draw a circle around it, and from the circle draw a line to a caret (^) at the place where the insertion is to be made Paste this slip securely to page 12 If several inserts are made in page 12, mark these Insert A ' Insert B "Insert C ' "Insert D*, indicating the last insert by the mark

3 *General method.* To insert a passage of several lines in a page of a later draft of the manuscript the following method may be used Suppose the insertion is to be made in page 7 of the manuscript The passage to be inserted should be written on a fresh sheet of paper (full size) In the upper margin write "A Insert in page 7 and draw a circle around the passage Number this sheet "7A" and place it after page 7 In the margin of page 7 write "Insert A, draw a circle around it, and from the circle draw a line to a caret (^) at the place where the insertion is to be made If several insertions are made in page 7 mark these "Insert A, "Insert B Insert C Insert D*" (indicating the last insert by the mark *) and number the additional sheets "7A " '7B," '7C '7D* " placing them after page 7

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3. *Order of material.* Before sending your manuscript to a publisher be sure to have all parts in the proper order as outlined below.

(a) Author's name and address to which proofs are to be sent.

(b) Title name of author, footnote to title.

(c) Text material (each table and each long quotation being on a separate page)

(d) Literature cited (on a separate page)

(e) Footnotes (on a separate page)

(f) Legends for illustrations (on a separate page)

(g) Condensed title of 35 letters or less (on a separate page)

(h) Copy for illustrations.

ESTIMATING THE LENGTH OF THE PRINTED ARTICLE

A fairly accurate estimate of the length of the printed article can be made by means of the following simple formula

$$\text{Number of printed pages} = \frac{\text{Characters per MS line} \times \text{Lines per MS page} \times \text{Pages of MS}}{\text{Characters per printed line} \times \text{Lines per printed page}}$$

Letters punctuation marks, and spaces between words are counted as characters short lines at ends of paragraphs are counted as full lines

For example suppose that a manuscript has an average of 63 characters per line 27 lines to the page, and a length of 23 pages, and that the printed page has an average of 52 characters to the line and has 124 lines per page

$$\text{Number of printed pages} = \frac{63 \times 27 \times 23}{52 \times 124}$$

$$= 6.1$$

Allowance must, of course be made for the space to be occupied by tables and illustrations this may be difficult to

estimate accurately If center headings are numerous they should be taken into account also.

This method of estimating the length of printed material is easier and much more accurate than any method based upon word count. Words vary in length from "a" or "if" to "nitrobenzenesulfonamides" So the number of words per line is much more variable than the number of characters. Character count is the basis of the system used by printers for copy-fitting.

To obtain a count of characters (including blank spaces) in a typewritten line, measure the length of the line in inches and multiply by 10 for Pica[1] typewriting or by 12 for Elite typewriting. Measure a sufficient number of manuscript lines to obtain an average of the desired accuracy

In the case of printed matter it is necessary to make an actual count of the number of characters per line. Obtain an average based upon ten lines in the journal in which your article is to be published.

The space required for a legend may be calculated in a similar manner by taking into account the number of characters per line of such material and the number of lines per vertical inch on the printed page.

It is sometimes desirable to typewrite a manuscript so that the average character count per line of typewriting is nearly the same as the character count per line of print. If the manuscript of the present book had been typewritten with 55 characters per line (i.e., with Pica typewritten lines 5½ inches long) then the manuscript and printed matter would have almost matched line by line

[1] The true pica, used in measuring printed matter is $\frac{1}{6}$ inch, not $\frac{1}{10}$.

KINDS OF TYPE AND THEIR INDICATION IN THE MANUSCRIPT

1 *Roman* The type in general use is called Roman There are three kinds of Roman type (a) CAPITALS (caps), which may be indicated in the manuscript by drawing three lines under the word or letter to be capitalized, (b) SMALL CAPS (capital letters about half as high as caps), which may be indicated in the manuscript by drawing two lines under the letter or word, (c) lower case letters (ordinary small letters) A diagonal line may be drawn through a capital letter to indicate that it should be printed as a small letter

2. *Italics* *In italic type, or italics the letters slope up toward the right* To indicate italic type, draw a single straight line under the letter word, or figure If italic capitals are desired, underscore with four straight lines

3 *Bold face* Type with a conspicuous or heavy face is called bold face or **black-face.** To indicate bold-face type, underscore with a wavy line. This type should rarely be used

4. *Face and body of type* A single piece of type cast by a Monotype machine is a rectangular block of metal with a flat top which bears in relief a letter or other character The upper or printing surface of the raised character is the face and the block bearing the character is the body The part of the flat top which projects beyond the base of the raised character is known as the shoulder A whole line is cast in one piece or slug, by a Linotype machine

5. *Size of type* The sizes of type are classified according to the dimensions of the bodies When the top of the type is viewed the height of the body indicates the size of the type the raised character always being slightly

smaller than the top of the body The following examples illustrate the common sizes as they appear when printed

This line is set in 6-point type.
This line is set in 8-point type.
This line is set in 9-point type.
This line is set in 10-point type.
This line is set in 11 point type
This line is set in 12-point type.

The unit employed in sizes of type is the point, or $\frac{1}{72}$ inch. Thus 10-point type has a body 10 points ($\frac{10}{72}$ inch) high, and has a face, or raised character slightly less in height, so that there will be a very small space between the printed lines. When 10-point type is used in composition without additional spaces between the lines, it is said to be set "solid." Usually however the lines are separated by additional spaces or the type is "leaded." This may be done by thin strips of metal called "leads But in the composition of books and periodicals the extra space generally is provided by casting the type on a larger body In most work 10-point type is cast on a 12-point body the effect being the same as if a 2-point lead were inserted between the lines The type is then said to be 10-point leaded, or more accurately 10-point type on 12-point body Scientific journals often employ 11 point type on 13-point body with quotations set in 10-point on 12-point body all other subsidiary matter (footnotes bibliographies tables etc.) is usually set in 8-point type on 10-point body This book is printed in 10-point on 12-point, with footnotes, etc., in 8-point on 10-point.

6. *Size of type page.* The unit employed in measuring the width and depth of the type page is termed a 12-point

em (this term is literal, being the exact width of the capital letter "M"), or a pica, which is 12 points ($\frac{12}{72}$ or $\frac{1}{6}$ inch) long. Thus a type page that is $3\frac{1}{2}$ inches wide is twenty one 12-point ems in width ($3\frac{1}{2} \div \frac{1}{6} = 21$).

7 *Spacing*. The em is used as a unit for measuring printed matter. An em of 12-point type (12 set) is 12 points ($\frac{1}{6}$ inch) wide (and also 12 points high); an em of 10-point (10 set) is 10 points wide; an em of 8-point (8 set) is 8 points wide. The em and halves of the em are used for indentation and spacing, and also for expressing the lengths of dashes. An em quad is a block of type that is one em in width; the ordinary dash (—) or em dash is the width of an em quad. An en quad is half of the width of an em; and an en dash (–) used to separate page numbers in citations is an en in width.

8 *Specifications*. Complete specifications for a publication include the styles and sizes of type for body, subsidiary matter, tables, references, headings, etc., the dimensions of the type page (in picas), the margins, the paper, the binding, instructions regarding *illustrations*, etc. The publisher ordinarily takes care of these details, but an editor or an author who is preparing copy ready for the printer should give considerable attention to all these questions.

CAPITALS

The subject of capitalization is difficult to handle with definite rules, but capitals should be used according to a uniform style throughout a single article. For this reason a special revision of the manuscript should be made with the aim of making capitalization uniform.

1 *Proper nouns*. Capitalize a proper noun designating an individual person or thing. Also, capitalize a

derivative of a proper noun if the derivative retains close association with the proper noun.

2. *Words derived from proper nouns.* Be consistent in the capitalization of words derived from proper nouns. The words *volt*, *ampere*, *farad*, *ohm*, *coulomb* and *watt* should not be capitalized. It is better to capitalize *India ink Paris green, Prussian blue, plaster of Paris, Bordeaux mixture.* Follow consistently a single unabridged dictionary preferably *Webster's New International Dictionary*

3. *Manufactured products.* Capitalize the significant parts of the name of a manufactured product. (For example Pyrex glass, Cellophane membrane)

4. *First words.* Begin with a capital: a sentence a complete sentence directly quoted, a legend of a table or an illustration, a center subheading, a paragraph side heading, or a topic in a table of contents

5. *Titles of publications in text.* In the text, capitalize all important words in titles of books and periodicals and in titles of chapters in books and of articles in periodicals. (For example Chapter XII of Clark's *The Determination of Hydrogen Ions* is entitled "Theory of the Hydrogen Electrode" An article on "Cobalt and Nickel in Soils and Plants" appeared in *Soil Science*)

In footnote citations and in lists of literature cited, capitalize only the first word and proper nouns in English titles of books and of articles in periodicals (page 84)

6. *Scientific names* In botanical and zoölogical work capitalize the scientific names of genera, families orders, classes, subdivisions, and divisions of plants and animals. (For example *Triticum*, Gramineae Glumiflorae, Monocotyledoneae Angiospermae Spermatophyta.)

7 *Common names derived from scientific names* Do not capitalize common names derived from scientific

names of plants and animals. (For example ameba (amoeba), angiosperm, bacillus)

8 *Chemical and medical terms* Do not capitalize the names of chemicals, medicines, diseases, and anatomical parts

9 *Table, figure plate* Do not capitalize *table figure* and *plate*. (For example The results given in table 2 are shown as graphs in figure 3)

10. *Miscellaneous terms*. Do not capitalize such words as *plot*, *plat*, *series*, *class*, *exhibit*, *form*, *group* *schedule* *section*, *appendix*, *station*, etc., even when immediately followed by a figure or a capital letter

ITALICS

Indicate italic type in the manuscript by drawing a single straight line under the letters words or numerals that are to be italicized.

1 *Algebraic symbols*. Algebraic symbols and equations should be italicized. (For example $Ax + By + C = 0$) In equations only the full-sized letters should be itali cized superscript and subscript letters should not be italicized Numerals should not be italicized. (For ex ample $T^n + D_4 - H^b = 2L_n$)

Chemical symbols and certain other standardized symbols are not italicized

2. *Explanatory letters in illustrations* Some journals prefer to use italic or slant letters to designate points lines objects, etc. in diagrams drawings and graphs Even if Roman or vertical lettering is used in the illustration, italics should always be used in the legend and in the text when reference is made to such explanatory letters (Example of legend of diagram Fig. 1 Diagrammatic cross section of coconut pinna, lines *AB* and

AC representing the two pinna wings, hinged to the midrib at *A*.)

3. *Genera and species.* In botanical, bacteriological, zoological, and geological work, italicize scientific names of genera species, and varieties, and of genera alone.[1] (For example *Phaseolus lunatus* *Musa sapientum* Linn. var *cinerea* (Blanco) Teod. *Bacillus coli* (Escherich) Mig. *Phytophthora*.) But do not italicize names of classes orders and families When used in tables and in titles of articles scientific names are usually not italicized.

4. *Common names derived from scientific names.* Do not italicize common names derived from scientific names of plants and animals. (For example Ameba (amoeba) angiosperm, bacillus, bacterium, paramecium, protozoan, streptococci.)

5. *Books and periodicals.* Italicize titles of books, pamphlets and periodicals when these appear in the text.[2] (For example· Fieser and Fieser's *Organic Chemistry*.) In footnote citations and in lists of literature cited, such titles are usually not italicized.

6. *Subdivisions of books and periodicals.* Use quotation marks—not italics—for titles of chapters in books or titles of articles in periodicals when these are given in the text. (For example Chapter 1 of Yost and Russell's *Inorganic Chemistry* deals with "Nitrogen and Its Oxides and Sulfides." An article on "Absorption of Water by Plants" appeared in *The Botanical Review*.) In footnotes and in lists of citations it is customary to use neither italics nor quotation marks

7. *Article.* The word *the* or *a* should be italicized and

[1] Many zoological publications do not italicize scientific names. (For example· Mus musculus.)

[2] Some journals use quotation marks instead of italics for titles of books.

capitalized when it begins the title of a book or a periodical.[8] (For example Fisher's *The Design of Experiments*. An article in *The American Journal of Botany*)

8 *Technical terms* It is permissible to italicize a letter or word to which special attention is called. An unusual technical term, requiring formal definition, may be italicized the first time it appears in an article. When an expression is regarded as quoted, it should be enclosed in quotation marks (For example The term *atmometric index* will be used in place of the expression 'evaporating power of the air ') It is best to avoid over-use of italics, capitals, and other special devices for emphasizing ideas They often lead to an exaggeration of an idea or fact. If used excessively they do not even give emphasis or distinction.

9 *Chemical and medical terms* Do not italicize the names of chemicals medicines, diseases and anatomical parts (For example Uranium hexafluoride, hydroquinone atropine, penicillin diabetes mellitus oesophagus)

10 *Foreign words.* Do not italicize foreign words.[9] (For example Intra-vitam staining ceteris paribus, in medias res in situ en masse viz. et al)

NUMBERS

1 *General* Use figures for all *definite* weights, measurements percentages and degrees of temperature (For example 0 7 kgm. 2¾ inches, 15 0 ml. 112°C) Spell out all *indefinite* and *approximate* periods of time and all other numerals that are used in a general manner (For

[8] This rule is often ignored in referring to the name of a periodical

[9] Some journals italicize foreign words or phrases that have not come into common use in English

example One hundred years ago, thirty years old, about two and one-half hours, ten instances, three times) Judgment must be exercised in this matter for instance figures should be used in experimental data where periods of time are definite and of frequent occurrence The conservative rule is to spell out numbers wherever possible Some journals spell out only small numbers those under 10 or under 100

2. *Consistency* Be consistent throughout the article in the use of figures Do not express small numbers in words in one paragraph and in figures in another

3. *Beginning of sentence.* Never begin a sentence with a figure. Revise the sentence or if this is impossible write the number in words

4. *Avoiding confusion.* Spell out numbers if confusion would be caused by the use of figures. (For example Fifteen 200-watt Mazda lamps)

5. *References to tables.* Use figures for all numbers taken from tabular matter

6. *Metric system.* The metric system of weights and measures should usually be employed in scientific publications. Where it is customary to use a non-metric system, as in engineering, metric equivalents may be given in parentheses

Abbreviations. Universally understood abbreviations of metric weights and measures may be used in tables, footnotes, and citations, and in the text when directly following figures. (For lists of abbreviations, see page 50.) Non-metric units should always be spelled out, except in engineering.

8. *Temperatures* Temperatures should usually be expressed in centigrade degrees. The equivalent in the Fahrenheit system may be given in parentheses if desired.

9 *Time.* Employ figures for hours of the day using a

capitalized when it begins the title of a book or a periodical.[a] (For example Fisher's *The Design of Experiments* An article in *The American Journal of Botany*)

8 *Technical terms* It is permissible to italicize a letter or word to which special attention is called. An unusual technical term requiring formal definition, may be italicized the first time it appears in an article. When an expression is regarded as quoted, it should be enclosed in quotation marks (For example The term *atmometric index* will be used in place of the expression "evaporating power of the air") It is best to avoid over-use of italics, capitals and other special devices for emphasizing ideas. They often lead to an exaggeration of an idea or fact. If used excessively they do not even give emphasis or distinction.

9 *Chemical and medical terms.* Do not italicize the names of chemicals medicines diseases and anatomical parts (For example Uranium hexafluoride hydroquinone atropine penicillin diabetes mellitus esophagus.)

10 *Foreign words* Do not italicize foreign words[b] (For example Intra vitam staining, ceteris paribus, in medias res in situ en masse viz. et al)

NUMBERS

1 *General* Use figures for all *definite* weights measurements percentages, and degrees of temperature (For example 6 7 kgm 2¾ inches, 15 6 ml 112°C) Spell out all *indefinite* and *approximate* periods of time and all other numerals that are used in a general manner (For

[a] This rule is often ignored in referring to the name of a periodical

[b] Some journals italicize foreign words or phrases that have not come into common use in English.

favored by most writers. (Some journals use the symbol % in tables or even in the text.)

18. *Per cent and percentage.* Do not use *per cent* for *percentage.* *Per cent* should be preceded by a number (For example: Three analyses gave the following percentages of sugar 93.2, 93.1 and 92.9 There was an increase of 15 per cent in production.)

19 *Basis for percentage.* Always make clear the basis used for expressing percentages (For example The phrase "a 5 per cent solution of alcohol in water" correctly means 5 grams of alcohol in 100 grams of the solution, but some writers use it to mean 5 ml. of alcohol in 100 ml of the solution.)

20. *Standard error or probable error* Be careful to state whether *standard error* or *probable error* is meant in an expression such as "10.3 ± 0.21 grams."

21. *Plural.* Use the plural form when referring to a quantity or measurement of more than one. (For example About one and one-half kilometers 1½ inches.)

22. *Singular and plural forms of verbs.* When total quantity is indicated the singular verb may be used. (For example, it is permissible to write To each culture 300 ml. of solution was added.) But it is better to recast the sentence and avoid the difficulty (For example Each culture received 300 ml. of solution.)

23 *Mathematical expressions.* To simplify printing, reduce mathematical expressions to a single line when possible. Use a slant line to signify division, and use fractional exponents instead of square-root and cube-root signs.

24. *Verification.* The use of statistical or mathematical formulae should be checked by a specialist in the field.

25. *Significant figures.* In publishing a computed number retain no more significant digits than are con-

colon to separate hours and minutes (For example 7 00 a.m., 3 30 p.m., 12 m., 12 p.m.)

10 *Dates.* Use figures for days of the month, spelling out the name of the month and omitting *d, th, st.* (For example September 21 1946)

11 *Money* Use figures for sums of money written with a dollar sign (For example $15 65 $25 *not* $25 00, but definite precision sometimes requires the use of ciphers at right of decimal.)

12 *Twenty-one to ninety-nine* Cardinal numbers from twenty-one to ninety nine, inclusive should be written with hyphens

13 *Hyphens in ordinal numbers* Ordinal numbers should be joined with hyphens (For example Thirty fourth, one-hundred-and-eleventh.)

14. *Comma in figures.* In tabular matter use a comma to separate a number of four or more figures, grouping three units to the right. In the text, omit a comma in a number containing four figures

15. *Fractions.* Decimal fractions should be employed in the metric system. Common fractions used in an indefinite manner should be spelled out, joining the numerator to the denominator with a hyphen. (For example One-half of the balance two-thirds of the residue, about one-tenth of this quantity) Use figures for common fractions when designating definite weights and measurements. (For example ½-inch pipe.) Simple fractional expressions may be written with a slant line Very large fractions should be expressed decimally

16 *Half and quarter* Compounds of *half* and *quarter* should be written with a hyphen (For example Half full, quarter-past. But One half was dried the other was not.)

17 *Per cent.* Omission of a period after *per cent* is

and at the bottom of this column, put the sum of these squares (S)

4. Compute the standard error of the mean by taking the square root of the quotient obtained by dividing the sum of the squares by the product of the number of readings times one less than this number:

$$E_M = [S/(\lambda(\lambda-1))]^{\frac{1}{2}}$$

5. Write the mean and its standard error in the form $M \pm E_M$ (According to the theory of probabilities, 68 per cent of many similarly determined means, based on large samples, should fall within $\pm E_M$ of the population mean, 95 per cent may be expected to fall within $\pm 1.96 E_M$, and 99 per cent within $\pm 2.58 E_M$.)

SIGNIFICANCE OF THE DIFFERENCE BETWEEN A POPULATION MEAN AND THE MEAN OF A RANDOM SAMPLE

1. Compute n from

$$n = \lambda - 1$$

where λ is the number of readings upon which the mean of the random sample was based.

2. Compute the value of t from

$$t = (M - m)/E_M$$

where M is the mean of the random sample, m is the known or assumed value of the population mean, and E_M is the standard error of the mean of the random sample.

3. In the accompanying table [1] find the *smaller* value

[1] This table is reprinted from table IV of Fisher: *Statistical Methods for Research Workers*, Oliver & Boyd Limited, Edinburgh, by permission of the author and publishers.

sistent with its accuracy In statistical work the following rule may be a useful guide In the published constant, retain no figures beyond the position of the first significant figure in one-third the standard error; in all computations keep two more places. (For example 129 ± 3 1 *not* 129.2 ± 3 1)

26 *Roman numerals.* Where possible, avoid the use of Roman numerals, since they are not readily understood

RELIABILITY AND SIGNIFICANCE OF MEASUREMENTS

This section provides a brief introduction to some aspects of statistical methods. It is hoped that the reader will study the treatises by Croxton and Cowden, R. A. Fisher D D Paterson, and G W Snedecor cited in the bibliography of this book.

The following directions outline a working system for (*a*) computing the standard error of the mean of a series of measurements obtained from a random sample, (*b*) ascertaining the significance of the difference between the population mean and the mean of a random sample, (*c*) judging the significance of the difference between two such sample means, and (*d*) estimating the size of an adequate sample

STANDARD ERROR OF THE MEAN

1 Write the readings in a vertical column At the bottom of the column, write the sum of the readings, divide this by the number of readings (N) and set down the mean (M)

2. In a second column put opposite each reading the difference between it and the mean.

3 In a third column, write the square of each difference

and at the bottom of this column, put the sum of these squares (S)

4. Compute the standard error of the mean by taking the square root of the quotient obtained by dividing the sum of the squares by the product of the number of readings times one less than this number

$$E_M = [S/(N(N-1))]^{\frac{1}{2}}$$

5. Write the mean and its standard error in the form $M \pm E_M$ (According to the theory of probabilities, 68 per cent of many similarly determined means, based on large samples, should fall within $\pm E_M$ of the population mean, 95 per cent may be expected to fall within $\pm 1.96\, E_M$ and 99 per cent within $\pm 2.58\, E_M$)

SIGNIFICANCE OF THE DIFFERENCE BETWEEN A POPULATION MEAN AND THE MEAN OF A RANDOM SAMPLE

1 Compute n from

$$n = N - 1$$

where N is the number of readings upon which the mean of the random sample was based.

2. Compute the value of t from

$$t = (M - m)/E_M$$

where M is the mean of the random sample m is the known or assumed value of the population mean, and E_M is the standard error of the mean of the random sample.

3 In the accompanying table [13] find the *smaller* value

[13] This table is reprinted from table IV of Fisher: *Statistical Methods for Research Workers*, Oliver & Boyd Limited, Edinburgh, by permission of the author and publishers.

of t corresponding to n. If the computed value of t is greater than the value of t found in the table, the difference between the population mean and the mean of the random sample may be regarded as significant. If the computed value of t exceeds the larger value of t in the table, the

TABLE 1

Table for use in estimating the significance of a difference

n	t		n	t	
	P = 0.05	P = 0.01		P = 0.05	P = 0.01
4	2.78	4.60	15	2.13	2.95
5	2.57	4.03	16	2.12	2.92
6	2.45	3.71	17	2.11	2.90
7	2.37	3.50	18	2.10	2.88
8	2.31	3.36	19	2.09	2.86
9	2.26	3.25	20	2.09	2.85
10	2.23	3.17	25	2.06	2.79
11	2.20	3.11	30	2.04	2.75
12	2.18	3.06	40	2.02	2.70
13	2.16	3.01	50	2.01	2.68
14	2.15	2.98	Infinity	1.96	2.58

This table is reprinted from table IV of Fisher *Statistical Methods For Research Workers* Oliver & Boyd Limited, Edinburgh, by permission of the author and publishers. The reader is advised to consult this book and also Fisher's *The Design of Experiments*

difference is highly significant A significant difference indicates that the random sample was probably not drawn from a population having a mean of m.

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEANS

1 Subtract the smaller mean (M_2) from the larger mean (M_1) to obtain the difference (D)

2 Obtain the standard error of the difference between

the two means by taking the square root of the sum of the squares of the two standard errors of the means

$$E_D = [(E_{M_1})^2 + (E_{M_2})^2]^{\frac{1}{2}}$$

where E_{M_1} and E_{M_2} are the standard errors of the means. This expression for E_D should be used only when the two random samples are independent.

3. Write the difference and its standard error in the form $D \pm E_D$.

4. Compute n from

$$n = (N_1 - 1) + (N_2 - 1)$$

where N_1 and N_2 are the number of readings upon which the means were based.

5. Compute t from $t = D/E_D$. In the accompanying table[14] find the *smaller* value of t corresponding to n. If the computed ratio is greater than the value of t found in the table the difference may be considered to be significant. If the ratio exceeds the larger value of t in the table, the difference may be regarded as highly significant. The P (probability) value indicates the probability of obtaining a plus or minus difference equal to or greater than that indicated by the value of t.

ADEQUACY OF SAMPLE SIZE

1. An estimate may be made of the size of each of two samples needed in order that a certain percentage difference between the two sample means may be regarded as significant. For simplicity it is assumed (a) that the two populations from which the random samples are

[14] This table is reprinted from table IV of Fisher: *Statistical Methods for Research Workers* Oliver & Boyd Limited, Edinburgh, by permission of the author and publishers.

of t corresponding to n. If the computed value of t is greater than the value of t found in the table, the difference between the population mean and the mean of the random sample may be regarded as significant. If the computed value of t exceeds the larger value of t in the table the

TABLE 1

*Table for use in estimating the significance of a difference**

n	t		n	t	
	$P = 0.05$	$P = 0.01$		$P = 0.05$	$P = 0.01$
4	2.78	4.60	15	2.13	2.95
5	2.57	4.03	16	2.12	2.92
6	2.45	3.71	17	2.11	2.90
7	2.37	3.50	18	2.10	2.88
8	2.31	3.36	19	2.09	2.86
9	2.26	3.25	20	2.09	2.85
10	2.23	3.17	25	2.06	2.79
11	2.20	3.11	30	2.04	2.75
12	2.18	3.06	40	2.02	2.70
13	2.16	3.01	60	2.01	2.66
14	2.15	2.98	Infinity	1.96	2.58

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difference is highly significant. A significant difference indicates that the random sample was probably not drawn from a population having a mean of m.

SIGNIFICANCE OF THE DIFFERENCE BETWEEN MEANS

1. Subtract the smaller mean (M_2) from the larger mean (M_1) to obtain the difference (D).
2. Obtain the standard error of the difference between

A SET OF STANDARD ABBREVIATIONS

Standard abbreviations of units of weight and measure are given in the accompanying table

The following general principles should be observed

1 *Period.* A period should be used after each abbreviation, although it is omitted after certain symbols.[13]

2. *Singular and plural.* The same form should be used for both singular and plural. (For example 0.5 kgm., 12.3 kgm.)

3. *Small letters* Small letters should be used for abbreviations but a few symbols are capitalized.

Most common units of weight and measure and their abbreviations

UNIT	ABBREVIATION
Ångstrom	Å
are	a.
barrel	bbl.
board foot	bd. ft.
bushel	bu.
carat, metric	c.
centare	ca.
centigram	cgm.
centiliter	cl.
centimeter	cm.
chain	ch.
cubic centimeter (milliliter)	cc.
cubic centimeter	cu. cm.
cubic decimeter	cu. dm.
cubic dekameter	cu. dkm.
cubic foot	cu. ft.
cubic hectometer	cu. hm.
cubic inch	cu. in.

[13] The Government Printing Office and many journals omit the period after the abbreviations of metric units. For example: mm, kv, °C; but a. c., d. c., e. m. f.

drawn have the same degree of variability and (b) that the two random samples are independent.

2 Obtain an exploratory random sample of size N (as large as practicable) of one of the two populations, and calculate the mean (M) and the standard error of the mean (E_M)

3 Compute the required sample size (N) for each of the two samples from the following formula

$$N = 2 \times (2.16)^2 \times N \times (100 \times E_M/M)^2/d^2$$

where 2.16 is a value obtained from a t table and corresponds to a probability of 0.03 for a large sample and d is the percentage difference desired to be significant.

4 It must be borne in mind that the procedure here outlined can give only a rough estimate of adequate sample size and should not be used for small samples.

ABBREVIATION OF UNITS OF WEIGHT AND MEASURE

The general rule regarding abbreviations is to employ only those abbreviations which you know are used by careful writers in your science and to conform to the style of the publication in which your article is to appear. The names of chemical compounds, rather than their symbols should be used in the text. It is a good rule always to spell out the names of units of weights and measurements of all systems except the metric; the metric abbreviations are understood in all parts of the world and so cause little confusion [11]. This rule is often ignored however where brevity is essential.

[11] For the sake of economy *The Journal of the American Chemical Society* uses the abbreviations %, A. cm cc ml g Å m. p f p b p cal and kcal rather than the words

UNIT	ABBREVIATION
micron	μ
mile	mi.
milligram	mgm.
milliliter	ml.
millimeter	mm.
millimicron	mμ
minim	min.
ounce	oz.
ounce apothecaries'	oz. ap.
ounce, avoirdupois	oz. av
ounce fluid	fl. oz.
ounce troy	oz. t.
peck	pk.
pennyweight	dwt.
pint	pt.
pound	lb.
pound apothecaries'	lb. ap.
pound, avoirdupois	lb. av
pound, troy	lb. t.
quart	qt.
rod	rd.
scruple, apothecaries'	s. ap
square centimeter	sq cm.
square chain	sq ch.
square decimeter	sq dm.
square dekameter	sq dkm.
square foot	sq ft.
square hectometer	sq hm.
square inch	sq. in.
square kilometer	sq km.
square meter	sq m.
square mile	sq. mi
square millimeter	sq. mm.
square rod	sq. rd.
square yard	sq. yd.
stere	s.
troy	t.
yard	yd.

UNIT	ABBREVIATION
cubic kilometer	cu. km.
cubic meter	cu. m.
cubic mile	cu mi
cubic millimeter	cu mm.
cubic yard	cu yd
decigram	dgm.
deciliter	dl
decimeter	dm.
decistere	ds.
dekagram	dkgm
dekaliter	dkl
dekameter	dkm.
dekastere	dks
dram	dr
dram apothecaries	dr ap
dram avoirdupois	dr av
dram, fluid	fl dr
fathom	fath.
foot	ft.
firkin	fir
furlong	fur
gallon	gal
hectare	ha.
hectogram	hgm.
hectoliter	hl
hectometer	hm.
hogshead	hhd
hundredweight	cwt
inch	in.
kilogram	kgm.
kiloliter	kl
kilometer	km.
link	li
liquid	liq
liter	l
meter	m.
metric ton	t
microgram (0 001 mgm)	μg., γ

TERM	ABBREVIATION
hours	hr
inches	in.
indicated horse power	i.h.p.
kilogram-calories.	kg-cal
kilogram-meters	kg-m.
kilograms	kg.
kilometers	km.
kilovolts	kv
kilovolt-amperes	kv-a.
kilowatt-hours	kw-hr
kilowatts	kw
magnetomotive force	m.m.f.
mean effective pressure	spell out
meter-kilograms	m-kg
meters	m.
microfarad	spell out
miles	mi
miles per hour per second	mi. per hr. per sec.
milligrams	mg.
millimeters	mm.
minutes	min.
ohms	spell out
per	spell out
percentage	per cent (or % in tabular matter)
pounds	lb.
power-factor	spell out
revolutions per minute	rev. per min. (or r.p.m. in tabular matter)
seconds	sec
square	sq
square-root-of-mean-square	r.m.s.
ton-mile	spell out
tons	spell out
volt-amperes	spell out
volts	spell out
watt-hours	watt-hr
watts	spell out
watts per candle power	watts per c.p.
yards.	yd.

It will be noted that no abbreviations are given for "gram" and 'grain' In medical work especially, these two words should always be spelled out, because errors are likely to result from the use of such abbreviations as 'g' 'gr' and 'grs.,' and misinterpretation of such an abbreviation can lead to serious harm

ABBREVIATIONS USED IN ENGINEERING

The following list shows abbreviations used in many engineering publications.

TERM	ABBREVIATION
alternating current	spell out or a-c. when used as compound adjective
amperes	spell out
boiler horse power	boiler h.p
brake horse power	b.h p
British thermal units	B t.u
candle power	c p
centigrade	cent.
centimeters	cm.
circular mils	cir mils
counter electromotive force	counter e.m.f
cubic	cu
diameter	spell out
direct current	spell out or d-c. when used as compound adjective
electric horse power	e.h.p
electromotive force	e.m.f
Fahrenheit	Fahr
feet	ft
foot pounds	ft lb
gallons	gal
grains	gr
gram-calories	g-cal
grams	g.
high-pressure cylinder	spell out

4. *Use of common name* In papers dealing with agriculture, the scientific name of a well-known plant need not be repeated after the scientific name has been given once the plant may be referred to by its common name in the rest of the paper

5. *Capitalization* The generic name should be capitalized, and the specific name usually should not be capitalized.[13] There is good authority however for capitalizing names of species derived from generic names or from names of persons. (For example *Acer Negundo Ustilago Zeae Magnolia Soulangeana.*)

6. *Variety name* Capitalize the vernacular names of plant varieties (Yellow Dent corn, Binocol rice, Carabao mango, New Era cowpeas) but not the latinized names of varieties (*Lathyrus palustris* Linn. var *linearifolius* Ser)

ANIMALS

1 *Complete name* In papers on zoology or one of its branches, such as entomology names of animals should be given in a form similar to that used for plant names. [For example *Agromyza destructor* Malloch (bean fly) Family Agromyzidae Order Diptera *Bubalus bubalis* Lyd. (carabao) Bovidae *Equus caballus* Linn. (horse) Equidae.][14]

2. *Use of common name* In an agricultural paper well-known kinds of animals may be referred to by their common names the complete scientific name may be given only at the beginning of the paper or it may be omitted entirely (For example Berkshire swine, cattle horse, Barred Plymouth Rock fowls.)

[13] The Government Printing Office never capitalizes the specific name. (For example *Ustilago zeae.*)

[14] Many zoological publications do not italicize scientific names.

NAMES OF PLANTS AND ANIMALS

PLANTS

1 *Complete name* A complete plant name should include the name of the genus (in italics), the name of the species (in italics), and the abbreviated designation of the person who named the plant (in Roman type) (For example *Oryza sativa* Linn.) It is often desirable to add the common name of the plant and the name of the family (both in Roman type) [For example *Shorea polysperma* Merr (tanguile) Dipterocarpaceae, *Hemileia vastatrix* Berk. and Br (coffee rust) Pucciniaceae.] Unfortunately a plant may have received several common and scientific names Where scientific names differ in standard or commonly used works, one is chosen and the others are treated as synonyms. If a synonym is much used it is customary to insert it in parentheses after the accepted name. In an index, accepted names are usually printed in Roman type and synonyms in italics. In tables and in titles names of genera and species should be printed in Roman type.

2 *Omission of family name* The family name may often be omitted especially if the plant is well known.

3 *Necessity of scientific name* The scientific name in addition to the common name, should be given when the plant is first mentioned in a paper Use names that will be understood by foreign readers many of whom must translate an article before they can understand it For example *Manihot utilissima* is universally understood, but the common name camoteng cahoy would be unintelligible to readers in many parts of the world The scientific name may be enclosed in parentheses after the common name [For example The experiments described in this paper deal with the growth of rice (*Oryza sativa* Linn.)]

used to keep the column heads of the table small. A column should not be devoted to only one or two entries

TABLE 2

*Isotonic molalities and activities of water for solutions of orthophosphoric acid at 25°C. Reference standard, sulfuric acid**

$m_{H_3PO_4}$	$m_{H_2SO_4}$	a_w	$m_{H_3PO_4}$	$m_{H_2SO_4}$	a_w
1.0673	0.9873	0.9732	23.324	10.148	0.3323
1.7902	0.9924	.9633	21.554	10.419	.3050
2.9638	1.6162	.9331	25.302	11.748	.2773
4.3541	2.3062	.9052	25.768	11.961	.2702
5.1573	2.7330	.8800	25.904	12.068	.2540
8.1963	4.1823	.7967	31.044	12.326	.2470
9.2030	4.7601	.7221	31.972	12.827	.2306
10.254	5.0404	.6979	33.305	13.224	.2230
10.903	5.3309	.6714	34.079	13.424	.2167
11.670	5.4070	.6530	35.773	14.064	.1962
11.977	5.4660	.6509	37.424	14.429	.1857
11.938	5.7441	.6452	41.134	15.252	.1623
12.647	6.0790	.6202	43.035	15.733	.1515
13.130	6.4022	.5915	50.090	17.258	.1302
14.069	6.6349	.5708	57.263	18.785	.0957
15.658	7.3402	.5523	64.420	20.024	.0791
15.972	7.3646	.5227	64.620	20.064	.0798
18.034	8.1740	.4657	74.728	21.480	.0627
19.608	8.6564	.4402	120.88	27.01	
20.708	9.1341	.4064	124.00	29.37	
21.327	9.2040	.3937	277.4	33.69	
21.806	9.4043	.3674			

Data from Elmore, K. L., C. M. Mason, and J. H. Christensen. 1946. Activity of orthophosphoric acid in aqueous solution at 25° from vapor pressure measurements. Amer. Chem. Soc., Jour. 68: 2528–2532.

to a repetition of the same entry or to data that may be easily calculated from data in another column. Such

TABLES

1 *Importance* The first step in the analysis of experimental data is to arrange them in the form of tables. This part of the work requires a great deal of study before the best scheme for bringing out relationships is found. Two general types of tables should usually be prepared (*a*) those which contain the original data, including actual observations and measurements, and (*b*) those which contain derived data, bringing out special points and conclusions A large part of the work of interpretation of the data will have been completed when well-arranged tables have been made.

2 *Unity* Each table should be a unit. A table is a short-cut means of presenting facts to the reader and a table (like a sentence paragraph or article) should present one subject with distinctness. Do not attempt to bring out in a single table several comparisons of very different kinds. Avoid large tables they are confusing.

3 *Clearness*. The form of the table should be arranged to secure greatest clearness For each kind of comparison of data there is usually one form of table which brings out the comparison most clearly and systematically In addition to the absolute figures representing original observations, the table may include percentages ratios totals averages, etc the latter are often of great value in making comparisons

4 *Accuracy* Every item in the table must be checked for correctness

5 *Economy* Since tables cost much more per page than text material, they should be used only when needed and should not be made unnecessarily large For a two-column page they should be designed if possible to fit within a single column Abbreviations should be

used to keep the column heads of the table small. A column should not be devoted to only one or two entries

TABLE 2

*Isopiestic molalities and activities of water for solutions of orthophosphoric acid at 25°C. Reference standard, sulfuric acid**

$m_{H_3PO_4}$	$m_{H_2SO_4}$	a	$m_{H_3PO_4}$	$m_{H_2SO_4}$	a
1.0553	0.8673	0.9732	23.824	10.148	0.2535
1.7802	0.9904	9533	24.534	10.619	.2450
2.9558	1.6132	9311	25.202	11.746	.2373
4.3541	2.3052	.9042	25.768	11.981	.2332
6.1575	2.7320	.8800	25.993	12.073	.2340
9.1952	4.4825	7867	31.044	12.836	.2270
9.6130	4.7301	7731	31.982	12.827	.2206
10.254	5.0404	6977	32.305	13.224	.2230
10.903	5.3309	6774	34.009	13.414	.2162
11.070	5.4070	6730	35.773	14.064	1952
11.157	5.4560	6750	37.824	14.425	1537
11.958	5.7440	6452	41.154	15.253	1525
12.647	6.0790	6237	43.093	15.733	.1315
12.830	6.4422	6013	50.010	17.258	1222
14.087	6.6247	.5768	57.228	15.786	.0982
15.053	7.2422	.5223	64.420	20.024	.0771
15.912	7.3945	.5052	64.630	20.054	.0756
15.094	8.1710	4577	4.735	21.060	.0622
19.006	8.5534	4402	150.68	25.01	
20.735	9.1842	4054	224.00	29.37	
21.327	9.2040	.3937	227.4	31.67	
21.605	9.3048	.3874			

Data from Elmore, K. L., C. M. Mason, and J. H. Christensen. 1946. Activity of orthophosphoric acid in aqueous solution at 25° from vapor pressure measurements. Amer. Chem. Soc., Jour. 68: 2528–2532.

to a repetition of the same entry or to data that may be easily calculated from data in another column. Such

cases can usually be cared for in footnotes or in notes following the title

6 *Size* The table must be compiled so as to fit the page of the publication. On a two-column page, tables

TABLE 3

*Distances progressed at different times by three strains of Neurospora crassa growing on agar medium containing a limiting concentration of l(+)leucine (0.0075 mg./ml.)**

TIME	DISTANCE COVERED		
	Prototrophic 4 (adapted)	Heterokaryon 1	Leucineless
days	*mm.*	*mm.*	*mm.*
0.00	0	0	0
0.45	40	22	
0.97	80	45	
1.00			51
1.47	140	72	
1.52			73
1.88	182	96	
1.98			99
2.47			123
2.51	246	122	
3.03			147
3.10		148	

* Data from Ryan, F. J. and J. Lederberg 1946. Reverse-mutation and adaptation in leucineless *Neurospora* Nat. Acad. Sci. Proc. 32: 163–173

may occupy a single column or, if necessary, the full width of the page

When large tables are required the method of handling them should be left to the judgment of the printer. If a table is too large to come within the width of the page it may be possible to set it lengthwise on the page. If it will fit neither crosswise nor lengthwise, then it may be

possible to keep it within bounds by setting it in 6-point type, the smallest size used for book and periodical work. If this method fails the table may be spread across two facing pages.

TABLE 4

Mean number of aleurone dots on seeds with three a_1 genes and seeds with two a_1 genes from eight ears of crosses $a_1a_1DtDt \times a_1a_1dtdt$ or $a_1a_1dtdt \times a_1a_1DtDt$

Parents	Mean no. dots on a_1a_1Dt class	No. of seeds in class	Mean no. dots on a_1a_1Dt class	No. of seeds in class
2576 (1) × 2511a	18.2	48	10.0	43
2500 × 2511b	9.0	32	6.2	40
4343 (4) × 4344 (1)	10.2	132	6.1	173
4343 (8) × 4344 (7)	7.4	61	5.0	62
4343 (5) × 4344 (1)	8.8	70	4.2	76
4343 (9) × 4344 (2)	11.5	18	9.6	19
4343 (11) × 4344 (2)	3.5	30	2.6	42
4343 (12) × 4344 (5)	2.9	20	1.4	27
	8 | 64.3	436	8 | 43.1	425
Observed =	8.16		5.64	
Theoretical = on 3:2 ratio	8.23		5.32	

Data from Rhoades, M. M. 1938. Effect of the *Dt* gene on the mutability of the a_1 allele in maize. Genetics 23: 377–397.

A folder should not be used unless it is absolutely unavoidable. Folders are not only very costly but are unwieldy for the reader and are likely to be torn when handled in the library.

7. *Large tables in manuscript.* If a table requires a larger sheet than that used for the text of the manuscript the sheet may be folded and inserted in place as one of the manuscript pages.

8. *Each table on separate page.* Each individual table should be typewritten on a separate sheet of paper, without any of the text on the same page This is necessary to facilitate typesetting When the place for a table is reached in typewriting a manuscript, the text sheet should be removed from the typewriter (no matter where the typewriting ends) and a new sheet should be inserted, only the table (preceded by its heading and followed by its footnotes) should be written on this sheet. The text should be continued on a fresh sheet of paper If, through oversight or otherwise it becomes necessary to insert a table in a full page of text material, it should be treated as an insert (p 32)

9 *Open and ruled tables* Tables may be either open or ruled, the former generally are used in tables of only two columns though they are employed exclusively in some periodicals (for example in *The Journal of the American Chemical Society*) The suggestions given below refer specifically to ruled tables

10 *Examples.* Sample tables are given on pages 59–65 Care should be taken to prepare each table in exactly the proper form

11 *Heading, or title* Note the way in which the heading is made. The tables are numbered consecutively throughout each article The word 'Table followed by an Arabic number appears as a center heading (printed in 8-point caps) The legend or description of the table is centered above the body of the table only the first word and proper names have capital initials the legend is printed in 8-point italics Each word of the legend is underscored with a single straight line to indicate italic type to the printer The legend should be self-explanatory and should enable the reader to understand the table without referring to the text of the article It should be

broad enough to include all the data in the table Make it definite—allow only one meaning

12. *Box heads.* The box heads, at the tops of columns in a table appear in small caps (6-point) The secondary heads, when present, are printed in ordinary type (6-point lower-case)

TABLE 8

*Average dry weight of tops and selenium content of corn grown in culture solutions containing various concentrations of sodium selenate or seleniferous Astragalus extract**

SELENIUM IN CULTURE SOLUTION	AV. DRY WT. OF TOPS		SELENIUM CONTENT	
	Sodium selenate	Astragalus extract	Sodium selenate	Astragalus extract
p.p.m.	*grams*	*grams*	*p.p.m.*	*p.p.m.*
0	1.36	1 36	0	0
1	1 25	1 23	40	666
2	1 06	0 94	94	1182
5	0 65	0 68	109	1912
10	0 42	0 37	121	2533
20	0 19	0.20	223	3190

* Data from Trelease S F and H S. Greenfield. 1944. Influence of plant extracts, proteins, and amino acids on the accumulation of selenium in plants. Amer Jour Bot. 31 630-638.

13. *Units of measurement.* Units of quantity are given below the line under the box heads and printed in 6-point italics. (In the stub or first column such units are placed on the right according to a rule sometimes followed.)

14. *Body of table* Columns consisting of words in the body of the table should appear in ordinary type. Figure columns should be aligned on the right reading columns, on the left. Figure columns should be separated from perpendicular rules at least an en space decimals

should be aligned figures should be centered in the columns Omissions should be indicated by blank spaces the reasons for omissions of important data should be explained in footnotes. If possible the body of the table is printed in 8-point type, it is sometimes necessary to use 6-point type

15 *Footnotes* Explanatory footnotes to tables are indicated by means of standard footnote reference marks (* † ‡ § etc) placed after the words or the numbers to which the footnotes refer [14] The footnotes are typewritten on the sheet bearing the table. Each footnote is preceded by a symbol and is indented as a paragraph. Footnotes are printed in 8-point type leaded

16 *Special type* Bold-face and italic type may be used to distinguish different classes of data in a table. Uniform type treatment however is desirable. In general it is well to avoid unnecessary multiplicity of sorts of type

17 *Cross rules* Care should be taken that as few cross rules as possible are used A cross rule is necessary at the top of the table another is needed below the box heads, and a third is needed at the bottom of the table Any additional cross rules increase the cost of printing Where a line of demarcation is necessary it can be indicated effectively and inexpensively by a blank space which can be composed by the typesetting machine

18 *Spacing* In the printed table the figure columns should be cast to cover the normal requirements of the figure entries or wording of box heads spaces between

[14] Lower-case superscript letters are used instead of symbols by many journals The letters are usually placed *after* the words or *before* the numbers to which the footnotes refer The Government Printing Office uses superscript Arabic numerals.

perpendicular rules should if possible be the same the balance of the space may be put in the stub (first column) or other reading columns. Tables should be set leaded. In long tables, grouping the horizontal lines of figures in groups of four lines, by a double lead,

TABLE 8

Comparison of microbiological and chemical method for determining methionine and effect of presence of an equal weight of carbohydrates during hydrolysis of protein

MATERIAL ANALYZED	METHIONINE FOUND IN PROTEIN		
	Microbiological method with		Chemical method
	Leuconostoc mesenteroides	Streptococcus faecalis R	
	per cent	*per cent*	*per cent*
Beef heart†	2.82	2.83	2.45
Beef liver†	2.34	2.24	2.27
Casein‡	2.73	2.88	2.87
Casein and sucrose	2.42	2.42	2.41
Casein and arabinose	2.40	2.35	2.46
Casein and starch	2.45	2.48	2.42

Data from Lyman, C. M., O Moseley B. Butler S. Wood, and F Hale. 1946. The microbiological determination of amino acids. III. Methionine. Jour Biol. Chem. 166 161-171

† Protein content calculated as nitrogen content × 6.25.

‡ Difco isoelectric casein values not corrected for moisture and ash.

makes the table easier to read and aids in preventing inaccurate reading.

19 *References in text.* References to tables should be made by number (For example By reference to table 10 the data presented in table 8.)

FOOTNOTES

1 *Reference numbers in text.* Footnotes pertaining to the text should be numbered consecutively (from 1 up) throughout each article and indicated by superscript numerals ([1] [2] [3] etc) The reference numeral to the footnote should be placed in the text after the word or sentence to which the footnote refers. (It is placed *after* a punctuation mark if one occurs.) Indicate the superscript numeral by typewriting it above the line and placing a V-shaped mark under it. Observe that these references apply to the text only tabulations employ a separate series of symbols for each table If mathematical formulae containing exponents appear in the text care should be taken to avoid confusing exponents and footnote reference numbers.

2 *Footnotes at end of manuscript.* Footnotes should not be in the body of the text the text should have the reference numbers only Footnotes should be typewritten double-spaced on one or more separate sheets (as many footnotes to a sheet as convenient) Each footnote should be indented as a paragraph and should be preceded by a superscript numeral corresponding to the reference number in the body of the manuscript. The sheets bearing footnotes should be put at the end of the text copy each sheet bearing the word 'Footnotes enclosed in a circle.

This method is necessary in order to facilitate composition on the typesetting machines. When printed each footnote will be inserted at the foot of the proper page.

3 *Misuse of footnotes.* Use footnotes only where they are indispensable Include important material in the text omit irrelevant material.

USE OF THE LIBRARY FOR RESEARCH PURPOSES[14]

For a research worker the library plays a very important role. Original investigation must be supported by a review of the literature published by others in the same field. This section endeavors to give an introduction to the use of the library and to draw attention to some of the important works to be found there.

1 *The catalogue.* The catalogue is the key to the library collections. The card catalogue is most popular although some libraries have their catalogues in book form. When the cards are alphabetized in a single file under author title and subject, the name dictionary catalogue is used. Large libraries often have separate catalogues for certain collections. This is confusing to the user For example medicine and law may not appear in the general catalogue collections of doctoral dissertations may be found in special libraries with a separate card index, and manuscripts may be in a file by themselves. It is best to inquire at the reference desk if you fail to find what you wish.

When consulting the card catalogue it would be advantageous to find out what special filing rules may have been followed. For example, one would expect to find the cards alphabetized *word by word*. Thus *New York* should come before *Newfoundland* But some catalogues have the cards filed *letter by letter* in these *Newark* would appear before *New York* Libraries also differ in the case of *Mc* and *Mac*. It seems simpler to have all under *Mac*, but this method is not always followed. Usually

[14] Prepared by Miss Amy L. Hepburn, of the Columbia University Library

FOOTNOTES

1 *Reference numbers in text.* Footnotes pertaining to the text should be numbered consecutively (from 1 up) throughout each article and indicated by superscript numerals ([1] [2] [3], etc.) The reference numeral to the footnote should be placed in the text after the word or sentence to which the footnote refers. (It is placed *after* a punctuation mark if one occurs.) Indicate the superscript numeral by typewriting it above the line and placing a V-shaped mark under it. Observe that these references apply to the text only, tabulations employ a separate series of symbols for each table. If mathematical formulae containing exponents appear in the text care should be taken to avoid confusing exponents and footnote reference numbers

2 *Footnotes at end of manuscript.* Footnotes should not be in the body of the text the text should have the reference numbers only Footnotes should be typewritten double-spaced on one or more separate sheets (as many footnotes to a sheet as convenient) Each footnote should be indented as a paragraph and should be preceded by a superscript numeral corresponding to the reference number in the body of the manuscript. The sheets bearing footnotes should be put at the end of the text copy each sheet bearing the word Footnotes " enclosed in a circle.

This method is necessary in order to facilitate composition on the typesetting machines When printed each footnote will be inserted at the foot of the proper page.

3 *Misuse of footnotes* Use footnotes only where they are indispensable Include important material in the text omit irrelevant material.

explanations of abbreviations, as those in *Chemical Abstracts*, *Biological Abstracts* and *Science Abstracts*.

Government documents present a complexity all their own in the catalogue. The United States probably issues more publications than any other nation. The comprehensive cumulative indexes published by the Government should be used in locating a difficult reference. Monthly lists with a yearly index bring the file up to date. In spite of this aid an appeal often has to be made to the reference department for assistance in locating a document in the card catalogue so too much time should not be expended before soliciting help.

2. *Classifications* Libraries are classified in order to bring publications on a particular subject together. The two most familiar classifications are the *Dewey decimal system* and the *Library of Congress system*.

The Dewey decimal system is a numerical arrangement whereby a number can be expanded by means of a decimal. For example *General Science* is designated by the number 500, *Chemistry* by 540 *Organic Chemistry* by 548, while further divisions would make use of the decimal as 548.1 548.2, etc. There are infinite possibilities for expansion. Under this *class number* as it is called, a symbol is added, called the *Cutter number* which stands for the author. If the author is Smith, you will find *Sm 5* or *Sm 55*. These numbers are decimals. Sm 55 would stand just before *Sm 651*. Thus a book on organic chemistry might have a number like this

548.11
Sm 85

The *Library of Congress system* classifies by the use of letters. The first letter indicates the class the second a division of the class and further sectioning is made by

libraries do not file under prepositions in surnames, as *von* and *de*, but a preposition and an article, as *du*, is recognized as preceding the rest of the surname. To make doubly sure when in doubt, try both ways. Hyphenated names generally come under the first part of the surname as *Page-Wood, John*. When an author changes her name by marriage the name under which the author first wrote is most commonly used, but there should be a cross reference under the married name. Libraries differ in regard to the German umlaut *Müller* may be filed under *Muller* or *Mueller*

In locating serials—a term which includes periodicals, journals, magazines or publications of societies institutions, etc —the best rules to follow are those which appear in the first part of the *Union List of Serials in Libraries of the United States and Canada*. To quote

A serial not published by a society or a public office is entered under the first word not an article of the latest form of the title

A serial published by a society but having a distinctive title, is entered under the title with reference from the name of the society

The journals transactions proceedings, etc of a society are entered under the first word not an article of the latest form of the name of the society

Learned societies and academies of Europe other than English, with names beginning with an adjective denoting royal privilege are entered under the first word following the adjective (*Kaiserlich Königlich Reale Imperiale etc*)

If you have an abbreviated title that is difficult to understand consult the *World List of Scientific Periodicals*, published by the Oxford University Press, and also the volume listing abbreviations This list is arranged alphabetically by the first word of the title not an article. It is especially useful when a puzzling foreign reference is involved Special subjects have their own lists of

will find grouped together the works on the particular subject in which he is interested. Thus publications on the intricate life processes of plants are under *Botany—Physiological.* Again, the reference department should come to your aid if you are doubtful under which subject heading you should look. Most libraries depend upon the headings selected by the Library of Congress, but some choose their own.

In this brief introduction to the catalogue an attempt has been made to show that catalogues vary. Failing to find your reference in one place, try other possibilities and then ask someone in the reference department. Difficult foreign names or obscure abbreviations for periodicals may present problems in which only the reference department can help you.

4. *Reference works supplementing the card catalogue.* There are general reference works that supplement the card catalogue. Chief among these is the *U. S. Library of Congress, Catalog of Books* in over 166 volumes at the present time. *The British Museum, Catalogue of Printed Books* is an equally comprehensive series; every scientist should know this most scholarly of catalogues. A section on the Natural Sciences, consisting of five volumes with several supplements, has been published separately. There is also the great French catalogue of the collection in the Bibliothèque Nationale which has been completed to R. This important series published in Paris should not be overlooked in searching for a foreign reference. A useful feature is the listing of titles under the author's name showing in what volume or edition a work may be found.

The current record of books published in the United States, with listing of prices, is to be found in the *United States Catalog* and its supplements, the *Cumulative Book*

the use of numbers. For example, the letter *Q* stands for *Science QC* for *Physics* and *QC* 252–338 for *Heat*.

Although both schemes may look complicated, they afford the library a means of bringing together on the shelf the publications on a certain subject. This is particularly valuable to the research worker who has an opportunity to visit the shelves to consult familiar books and become acquainted with those that are new to him.

It is most important that the *call number*, the number appearing in the upper left-hand corner of the catalogue card, be copied in full when requesting a book. An *F* under the Cutter number as

546.2
D15
F

would mean folio size and thus very large book would undoubtedly be shelved in another place from books of medium size. Sometimes a volume number is added as

590 6
Un 33
vol. 7

This means that the reference you have found is in a certain volume of a series and the volume number must be included when requesting the book.

3 *Subject headings in the catalogue.* The subject approach to the catalogue should be more generally emphasized The subjects that appear at the top of the card are selected by specialists in certain fields. But as time goes on the headings may not be revised, so new developments may be filed under antiquated headings. Under the subject heading, the person using the catalogue

will find grouped together the works on the particular subject in which he is interested. Thus publications on the intricate life processes of plants are under *Botany—Physiological*. Again, the reference department should come to your aid if you are doubtful under which subject heading you should look. Most libraries depend upon the headings selected by the Library of Congress, but some choose their own.

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4. *Reference works supplementing the card catalogue.* There are general reference works that supplement the card catalogue. Chief among these is the *U S Library of Congress, Catalog of Books* in over 166 volumes at the present time. The British Museum, *Catalogue of Printed Books* is an equally comprehensive series every scientist should know this most scholarly of catalogues. A section on the Natural Sciences, consisting of five volumes with several supplements, has been published separately. There is also the great French catalogue of the collection in the *Bibliothèque Nationale* which has been completed to *R*. This important series published in Paris should not be overlooked in searching for a foreign reference. A useful feature is the listing of titles under the author's name showing in what volume or edition a work may be found.

The current record of books published in the United States, with listing of prices, is to be found in the *United States Catalog* and its supplements, the *Cumulative Book*

Index. A working set of this series consists of the *U S Catalog Books in Print* 1928 the three five-year cumulations of the *Cumulative Book Index* covering 1928–1932, 1933–1937, 1938–1942 and the biennial, annual, semi annual, and monthly cumulations which bring the record down to date Since 1928 the *Cumulative Book Index* has listed all books published in English in this and other countries.

A reference series not so well known is that of the *Royal Society of London, Catalogue of Scientific Papers* 1800–1900, in nineteen volumes. It forms an author index of publications that appeared in periodicals throughout the world, especially in publications of academies and learned societies. Three subject indexes have been brought out to date pure mathematics mechanics, and physics. *In the first volume of the author index* a list of abbreviations is found which is helpful in tracing difficult references

Information concerning reference material, bibliographies, dictionaries encyclopedias, standard reference series, etc is found arranged by subjects in the *Guide to Reference Books* by Isadore G Mudge published in 1936. Supplements by Constance M Winchell bring the guide to 1943 A new edition of this valuable work is now under consideration

5 *Aid to writing papers* Nearly every branch of pure or applied science has issued a style book of its own rules. It is advisable to have this at hand before commencing to write The *U S Government Printing Office Style Book* is a general type *Suggestions to Authors of Papers Submitted for Publication by the United States Geological Survey with Directions to Typists* is an example of a special type Another is the *Wistar Institute Style Brief*, which states that it is A Guide for Authors in

Preparing Manuscripts and Drawings for the most Effective and Economical Method of Publishing Biological Research."

6. *Affiliated libraries* In a large city the libraries of the various institutions are usually closely affiliated. Thus the libraries of the New York Botanical Garden and of the American Museum of Natural History are affiliated with the Columbia University Library Special libraries have become so numerous that their staff members have found it advantageous to organize in groups, under medicine biology etc., as a means of becoming better acquainted with the resources of all similar libraries. Ask your librarian concerning affiliated libraries and their regulations for outside users. Before visiting another library it is best to ascertain the hours during which visitors may consult the collection, especially on Saturdays, Sundays, and holidays.

In Philadelphia a plan is now being developed whereby the holdings of all the important libraries in the city will be represented in a union card catalogue When you consider the rich collection of works on natural history in the Academy of Natural Sciences of Philadelphia, you will realize the importance of this union catalogue

7 *Inter-library loans* Since it is impossible for a library to have all publications, a system of interchange of material, termed inter-library loan, is carried on by most libraries. This has developed into a very important service about which the research worker should know There is usually a library assistant in charge of inter library loans, and it is best to make arrangements directly through this person. Present your citation in printed form, complete and accurate in all details.

8. *Photographic services.* Reproductions of rare or

unusual books, as well as of papers in scientific periodicals, may be secured as Photostats or microfilms. A microfilm may be obtained for a nominal sum. Photostats are much more expensive even in negative form The disadvantage of the microfilm is that it has to be magnified or projected A magnifier provided with a simple lens, costs a few dollars, a complicated microfilm reading machine is worth several hundred Most large libraries have several machines that are available for use, it is best to find out which gives the clearest projection and is least difficult to handle.

9 *Map collection.* A map is sometimes a very important asset. It would be well to find out where the map collection is housed and the rules for borrowing In such a collection the best atlases and gazetteers, as well as large-scale maps of important countries, may be consulted

INDEXING AND ABSTRACTING TOOLS[17]

Before starting a new research project or preparing the results of research for publication an investigator needs to find out what other workers have done in the same field To make the literature of a particular science available to the scientist several different types of publications have been developed The chief of these are (1) the *index journal*, (2) the *abstract journal* (3) the *annual review book* (4) the *recent advances series* and (5) the *review journal*. While not all sciences have all these forms of publications, nearly every science has at least several of them. The examples given here are intended merely to call the reader's attention to the possibility of using such publications in his own field.

[17] Prepared by Miss Estelle Brodman of the Library of the College of Physicians and Surgeons Columbia University

1. *Index journals.* Search for literature is usually begun by making a list of previous books and journal articles on the subject. To prepare such a list, the research worker has to consult an index to the literature —a publication that lists by author subject or both all the books or articles in the science that have appeared within a certain period. Examples of such indexes are the monumental *Index-Catalogue of the Library of the Surgeon-General's Office* and the *Quarterly Cumulative Index Medicus.* These works give a more or less complete listing of all the books and articles on a particular subject, regardless of the worth of the writings.

2. *Abstract journals.* To find out exactly what these articles say without having to read each article in toto, the research worker can go to an abstract journal that summarizes the methods used and conclusions reached by the writers of the individual articles. A great many such abstract journals were published formerly in German but some of the better-known abstract journals in English are *Biological Abstracts* *British Abstracts* (formerly the *British Chemical and Physiological Abstracts*) *Chemical Abstracts, Science Abstracts, Tropical Diseases Bulletin,* and *Engineering Index* In these abstract journals, each article is summarized individually with little or no reference to other literature and no editorial comment.

3. *Annual reviews and yearbooks.* Frequently what is needed is a critical review of the articles that have appeared on a subject during the year with some indication of the relative importance of the individual articles. To supply this need, a group of publications has sprung up under the general title of *annual review* or *yearbook* (German, *Jahresbericht* French, *année*) Examples are the *Annual Review of Physiology* the *Annual Review of Biochemistry* and the *Yearbook of Dentistry* These

books, by authorities in their fields give critical reviews of the work reported during the year and are especially useful in pointing out important articles. They save the time of the research worker who would otherwise be obliged to read an abstract of each article published to see which ones were worth investigating further

4. *Recent advances series.* According to the procedure outlined above, a person investigating the literature in his field starts by using an *index journal* to compile a list of the articles published during the year He could then go to an *abstract journal* to find short summaries of each of the articles published or he might go to an *annual review* for a critical review of the entire year It will readily be seen, that by using this system, anyone wishing to cover the literature for ten or twenty years would have to peruse a very large number of volumes. Fortunately however this may not be necessary, since summaries of the literature covering several years—sometimes everything of importance that is known on a particular subject—have been developed There are two such classes of long term reviews the *recent advances series* and the *review journals*

The *recent advances series* summarizes progress in particular fields during a period of several years by reviewing the literature from the publication date of the previous edition to the publication date of the latest edition. For example the first edition of *Recent Advances in Physiology* appeared in 1925 the second edition reported the knowledge obtained during the period from 1925 to 1926 similarly the third edition added the knowledge obtained from 1926 to 1928 It thus cumulates and integrates the information found in the *annual reviews* It is usually critical and selective.

5 *Review journals* The *review journal* such as *Medi*

one *Chemical Reviews* or *Physiological Reviews* has as its object the summarizing of the knowledge in a particular field from the beginning of any work on that subject to the date of publication. Thus, an article on "Water Balance" in *Physiological Reviews* would discuss the early now historical literature as well as the newer advances being made at the time the article appeared. Each article is an entity in itself and, in contradistinction to the *recent advances series* no further reference is needed to earlier editions. For rapidly surveying a segment of a larger field, the *review journal* is without peer. It usually covers a longer period of time than the *annual review* or the *recent advances series* and is more critical than the *index journal* or *abstract journal*. But it must not be forgotten that the *review journal* is, by its very nature, more selective in the articles it calls to the reader's attention than any of the other tools discussed here. Since it covers a longer period of time, it can only touch the most important high-lights. For details the other tools must be used and finally of course the investigator must study critically—in their original, complete form—all the articles that bear directly upon his own research problem.

6. *Summary.* To recapitulate, a person attempting to get a complete review of the literature on a particular phase of physiology would go to (1) the *Index-Catalogue of the Library of the Surgeon-General's Office* or the *Quarterly Cumulative Index Medicus*, (2) *Biological Abstracts* or *British (Chemical and Physiological) Abstracts* (3) the *Annual Review of Physiology* (4) *Recent Advances in Physiology* and (5) *Physiological Reviews*. Which one of these he should go to first and in what order the others should be consulted, depends entirely upon the purpose for which the review of the literature is being made. It

is suggested that a discussion with the reference librarian will frequently point the way to a logical search of the literature.

7 *List of indexing and abstracting tools.* The list that is given below, though by no means complete, contains some of the most useful of the literature sources in a number of fields of science [11]

AGRICULTURE

Reference sources

Agricultural Index. 1916 +
United States Department of Agriculture Library Bibliography of Agriculture 1942 +

Card index.

United States Department of Agriculture Card Index.

Abstract journal.

United States Department of Agriculture Experiment Station Record 1889 +

ANTHROPOLOGY

Reference sources

Anthropos. 1914 +
Ethnographic Bibliography of North America. (Yale Anthropological Studies.) 1941 +

Review journal.

Anthropologischer Anzeiger 1924 +

BOTANICAL AND ZOÖLOGICAL SCIENCES

Reference sources

Botanisches Zentralblatt 1880 +
Royal Society of London. Catalogue of Scientific Papers. 1800-1900
Zoölogical Record 1864 +

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[11] Prepared by Miss Amy L. Hepburn, of the Columbia University Library

Card indexes.

Concilium Bibliographicum. 1896-1934.
Torrey Botanical Club. Botanical Publications of the New World. 1907 +
Wistar Institute of Anatomy and Biology. Advance Abstract Card Service. 1917 +

Abstract journals.

Berichte über die Wissenschaftliche Biologie 1926 +
Biological Abstracts. 1926 +
British Abstracts. Physiology. Biochemistry. Anatomy. 1945 + (Supersedes British Chemical and Physiological Abstracts. 1926-1944.)
Review of Applied Mycology 1922 +

Annual reviews.

Annual Review of Biochemistry 1932 +
Annual Review of Microbiology 1947 +
Annual Review of Physiology 1939 +

Recent advances.

Advances in Genetics. 1947 +

Review journals.

Biological Reviews (Cambridge Philosophical Society) 1923 +
Botanical Review 1935 +
Physiological Reviews. 1921 +
Quarterly Review of Biology 1926 +

CHEMISTRY

Reference sources

Beilstein, F. Handbuch der Organischen Chemie 1918 +
Mellor, J. W. A Comprehensive Treatise on Inorganic and Theoretical Chemistry. 16 vols. 1922-1937

Abstract journals.

Chemical Abstracts. 1907 +
British Abstracts. 1945 + (Supersedes British Chemical and Physiological Abstracts. 1926-1944.)

Annual reviews.

Annual Review of Biochemistry 1932 +
Chemical Society of London. Annual Report. 1904 +

Recent advances

Advances in Colloid Chemistry 1942 +
Advances in Colloid Sciences. 1942 +
Advances in Protein Chemistry 1944 +
Advances in Enzymology and Related Subjects. 1941 +
Advances in Carbohydrate Chemistry 1945 +

Review journal

Chemical Reviews. 1924 +

ENGINEERING

Reference sources.

Engineers Council for Professional Development. Annual Report 1932 +
Industrial Arts Index. 1913 +
Robert, A D Guide to Technical Literature 1939
Technical Book Review Index. 1935 +

Card index.

Engineering Index Card Service.

Abstract journals.

Engineering Abstracts. 1910 +
Engineering Index. 1906 +
Science Abstracts Series A and B 1903 +

Review journal.

Engineers Digest American Edition. 1943 + English Edition (Foreign Titles) 1940 +

GEOGRAPHY

Reference sources

Bibliographie Géographique Internationale. 1891 +
Current Geographical Publications. (American Geographical Society) 1938 +

Annual review

Geographisches Jahrbuch. 1866 +

Review journal

Geographical Review 1916 +

GEOLOGY

Reference sources

Bibliographie des Sciences Géologiques. (Société Géologique de France.) 1933 +

Bibliography and Index Exclusive of North America. (Geological Society of America.) 1933 +

Bibliography of North American Geology 1785-1945 in 7 parts. (Issued as Bulletins of the United States Geological Survey.)

Catalogue and Index of Contributions to North American Geology 1732-1891 (United States Geological Survey Bull 127)

Abstract journals

Mineralogical Abstracts. (Mineralogical Society of London) 1920 +

Neues Jahrbuch für Mineralogie Geologie und Paleontologie 1830 +

Annual review

Minerals Yearbook. (United States Bureau of Mines) 1932 +

HISTORICAL, ECONOMIC POLITICAL, AND SOCIAL SCIENCES

Reference sources

Cambridge Ancient History Medieval History Modern History (Comprehensive series of many volumes published by Macmillan Co.)

Cyclopedia of American Government. 3 vols. 1914.

Encyclopedia of the Social Sciences. 15 vols. 1930-1935.

New York Times Index. 1913 +

Public Affairs Information Service. Bulletin. 1915 +

Annual reviews

Annual Review of Biochemistry 1932 +
Chemical Society of London. Annual Report. 1904 +

Recent advances

Advances in Colloid Chemistry 1942 +
Advances in Colloid Sciences. 1942 +
Advances in Protein Chemistry 1944 +
Advances in Enzymology and Related Subjects. 1941 +
Advances in Carbohydrate Chemistry 1945 +

Review journal

Chemical Reviews. 1924 +

ENGINEERING

Reference sources.

Engineers Council for Professional Development. Annual Report 1932 +
Industrial Arts Index. 1913 +
Robert, A D Guide to Technical Literature 1939
Technical Book Review Index. 1935 +

Card index.

Engineering Index Card Service

Abstract journals.

Engineering Abstracts. 1910 +
Engineering Index. 1906 +
Science Abstracts Series A and B 1903 +

Review journal.

Engineers' Digest American Edition. 1943 + English Edition (Foreign Titles) 1940 +

GEOGRAPHY

Reference sources

Bibliographie Géographique Internationale 1891 +
Current Geographical Publications (American Geographical Society) 1938 +

Annual review

Geographisches Jahrbuch. 1900 +

Review journal

Geographical Review 1916 +

GEOLOGY

Reference sources.

Bibliographie des Sciences Géologiques. (Société Géologique de France.) 1923 +
Bibliography and Index Exclusive of North America. (Geological Society of America.) 1933 +
Bibliography of North American Geology 1785–1945 in 7 parts (Issued as Bulletins of the United States Geological Survey)
Catalogue and Index of Contributions to North American Geology 1732–1891 (United States Geological Survey Bull 127)

Abstract journals.

Mineralogical Abstracts (Mineralogical Society of London) 1920 +
Neues Jahrbuch für Mineralogie Geologie und Paleontologie 1830 +

Annual review

Minerals Yearbook. (United States Bureau of Mines.) 1932 +

HISTORICAL, ECONOMIC POLITICAL, AND SOCIAL SCIENCES

Reference sources.

Cambridge Ancient History Medieval History Modern History (Comprehensive series of many volumes published by Macmillan Co.)
Cyclopedia of American Government. 3 vols. 1914.
Encyclopedia of the Social Sciences. 15 vols. 1930–1935.
New York Times Index. 1913 +
Public Affairs Information Service. Bulletin. 1915 +

Review journals

American Academy of Political and Social Sciences. Annals. 1890 +
American Economics Review 1911 +
American Historical Review 1895 +

MATHEMATICS

Reference sources

Mathematical Reviews (American Mathematical Society.) 1940 +
Zentralblatt für Mathematik und ihre Grenzgebiete. (Deutsche Mathematiker Vereinigung.) 1931 +

Abstract journals

Jahrbuch über die Fortschritte der Mathematik. 1868 +
American Mathematical Society Bulletin 1891 +

MEDICINE

Reference sources

Index Medicus. 1879–1926
Quarterly Cumulative Index Medicus. 1927 +
United States Surgeon-general's Office Index Catalogue of the Library 1880 +

Abstract journals

Biological Abstracts. 1926 +
International Abstracts of Surgery 1913 +
International Medical Digest. 1920 +
Quarterly Review of Medicine 1913 +
Tropical Diseases Bulletin 1912 +

Annual reviews.

Annual Review of Physiology 1939 +
Yearbook of Dentistry 1936 +
Yearbook of General Medicine 1933 +
Yearbook of General Therapeutics. 1934 +
Yearbook of Neurology Psychiatry and Endocrinology 1933 +

Recent advances.

Advances in Internal Medicine 1942 +
Advances in Pediatrics. 1942 +
Recent Advances in Medicine 1924 +
Recent Advances in Physiology 1925 +
Recent Progress in Hormone Research. 1947 +
Vitamins and Hormones. 1943 +

Review journals.

Medicine 1922 +
Physiological Reviews. 1921 +

PHYSICS

Abstract journals.

Physikalische Berichte. 1920 +
Science Abstracts, Series A and B. 1903 +

Annual review

Journal of Applied Physics. 1931 +

Review journal.

Reviews of Modern Physics. 1929 +

PSYCHOLOGY

Abstract journals.

Biological Abstracts. Human Biology Abstracts, Section H. 1946 +
Psychological Abstracts. 1927 +

Annual review

L Année Psychologique. 1894 +

Review journals.

Psychoanalytic Quarterly 1932 +
Psychological Bulletin. 1904 +

SCIENCE IN GENERAL

Reference sources

Encyclopaedia Britannica
Mudge Isadore G Guide to Reference Books. (Supplements by Winchell Constance M) 1936 +
Nature (London) 1869 +
Naturwissenschaften 1913 +
Royal Society of London. Catalogue of Scientific Papers. 1800–1900
Science 1883 +

Annual review

American Yearbook. 1910 +

Review journal.

Science Progress in the Twentieth Century 1906 +

LITERATURE CITATIONS

Citations to literature are given in a bibliography at the end of the paper or in footnotes distributed through the paper The method of handling text references and of writing citations differs in detail in the various scientific journals A uniform economical standard though highly desirable, has not been adopted It may be noted however that there is a modern trend away from the use of Roman numerals, which are not readily comprehended as well as from the use of italic and black-face types which make much unnecessary work for author, editor and printer

In preparing references in the library it is most important to write the citations in detail, so that they include the full title and all other essential information In the final revision the references should be made to conform to the exact style employed by the journal in which the paper is to be published

Verify each item in every citation, preferably by going to the library and looking up all the publications. You must assume full responsibility for the accuracy and completeness of your citations. Although the editor may make minor revisions in the form of the citations to suit the style of the journal, he cannot be expected to look up spelling, figures etc., nor supply data that you have omitted.

When the citations are printed at the end of the paper the heading "Literature cited" is usually employed. It is customary to use the heading "Bibliography" only in books or in articles of a general or popular nature where specific reference to the citations is not made in the text.

Be sure to have the citations typewritten double-spaced throughout.

As a final precaution against error check all text references to citations just before submitting the paper for publication.

Directions are given below for two methods of handling citations. Each of these methods has wide usage. The first method has some advantages not possessed by the second. Reference by author and year of publication gives the reader the information he wants in the text and enables him to locate the citation easily in the alphabetical list at the end of the paper or to use the list independently as a source of literature. This method of reference is most convenient for the author because it allows him to add or delete citations during the revisions of the manuscript, without the necessity of repeatedly renumbering the series or inserting interpolated numbers. Furthermore, this style avoids the use of troublesome Roman numerals and black-face and italic types. A colon between volume number and page numbers gives clear separation and is readily understood by everyone.

FIRST METHOD

1 *Text reference to citation* Reference to a citation is made by means of the author's name followed by the year of publication in parentheses. [For example Foster (1945)] Where the author's name does not form a part of a sentence in the text reference is made in parentheses after an important word or at the end of the sentence. [For example (Bailey, 1932) (Allen, 1940 Dodge 1928, Thompson 1946)] If reference is made to several papers published in the same year by one author the suffixes a, b c, etc. are used after the year number the suffixes being chosen according to the order of reference in the text.

2 *Arrangement of citations.* The citations are typewritten double-spaced throughout and placed at the end of the article They begin on a new sheet of paper bearing the center heading 'Literature cited ' in capitals.

The citations are arranged alphabetically according to authors names. The author's name is typewritten flush with the left-hand edge of the writing, and second and succeeding lines are indented 10 spaces on the typewriter A number of papers by the same author are listed in chronological order, according to the year of publication a long dash is used in place of repetition of the author's name [13]

Journals with numbered volumes

3 *Items and form* Each citation of a paper in a journal includes the following items

[13] Where greater brevity is required text reference is made by superscript numerals or by numerals in parentheses. These refer to citations at the end of the article numbered in the order of text reference or preferably alphabetized and then numbered Extreme brevity is achieved by omission of titles of papers.

(a) *Surname of author* followed by a comma and initials, in large and small caps. (Underscore with two lines to indicate the small caps.) (For example WILLIAMS, R. R.) If there are several authors, only the name of the first is inverted. (For example GARNER, W. W., AND H. A. ALLARD.)

(b) *Year of publication* followed by a period. (For example 1945.) If several papers published in the same year by one author are cited the year number is followed by a, b, c, etc. in the order of reference in the text (For example 1946a, 1946b 1946c.)

(c) *Title of paper* exactly like the original in wording and punctuation. A period follows the title. Only proper names are capitalized, except in Danish, Dutch, or German.

(d) *Abbreviated name of serial publication* in the approved form.

(e) *Volume number* in Arabic figures followed by a colon.

(f) *Page numbers.* The number of the first page of the paper is separated by an en dash (indicated by a hyphen) from the number of the last page, and the latter is followed by a period.

HARFORD C. G. M. R. SMITH, AND W. B. WOOD JR. 1946. Sulfonamide chemotherapy of combined infection with influenza virus and bacteria. Jour Exper Med. 83 505–518.

KAMEN M. D 1946. Survey of contemporary knowledge of biogeochemistry I Isotopic phenomena in biogeochemistry Amer Mus Nat. Hist., Bull. 87 101–138.

MORGINSON W J 1946. Toxic reactions accompanying penicillin therapy Amer Med. Assoc., Jour 132 915–919

RHOADES, M. M. 1938. Effect of the Dt gene on the mutability of the a_1 allele in maize. Genetics 23: 377–397

ROBBINS, W. J., AND V KAVANAGH. 1942. Vitamin deficiencies of the filamentous fungi. Bot. Rev 8 411–471.

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Journals with numbered volumes

3 *Items and form.* Each citation of a paper in a journal includes the following items

[19] Where greater brevity is required text reference is made by superscript numerals or by numerals in parentheses. These refer to citations at the end of the article numbered in the order of text reference or preferably alphabetized and then numbered. Extreme brevity is achieved by omission of titles of papers.

DODGE, R., AND F. G. BENEDICT. 1915. Psychological effects of alcohol. Carnegie Inst. Washington Pub. no. 232 1-281.

SECOND METHOD

1. *Text reference to footnote citations.* The citations are given as footnotes numbered consecutively (from 1 up) throughout the paper (in the order in which they are given in the text) and indicated in the text by superscript numerals. If other footnotes occur (except those in tables) they are numbered in the same series with the citations. A repeated reference is given the number of the original reference. The superscript reference numeral to each footnote is placed in the text after the word or sentence to which the footnote refers. It is put after a punctuation mark if there is one. The superscript numeral is indicated by typewriting it above the line and putting a \-shaped mark under the numeral.

2. *Footnotes.* The footnotes are not inserted in the text, but are typewritten on separate sheets (as many as convenient on a sheet).[illegible] Each footnote is indented as a paragraph and is preceded by an Arabic numeral in parentheses corresponding to the reference number in the text. The sheets bearing footnotes are put at the end of the text copy, each sheet marked with the word "Footnotes," enclosed in a circle.[illegible]

[illegible] *The Journal of the American Chemical Society* requires each footnote to be inserted as a separate line (or lines) immediately following the line of text containing the word to which it refers. The footnote may be set off by short rules from the text material above and below it.

[illegible] Superscript numerals are used in many journals for both text references and footnotes.

In some journals, numerals in parentheses in the text refer to citations at the end of the article, which are numbered in the order of text reference or are alphabetized and then numbered.

Taylor D L 1942 Influence of oxygen tension on respiration fermentation, and growth in wheat and rice Amer Jour Bot 29 721-738.

Books

4 *Items and form* The copyright date is used as the year of publication The following examples illustrate the form used

Bayliss W M 1931 Principles of general physiology 4th ed. 882 p London Longmans Green and Co

Fleming A. (Editor) 1946 Penicillin Its practical application 380 p Philadelphia The Blakiston Co

Wilson E. B 1928. The cell in development and heredity 3rd ed. 1232 p New York The Macmillan Co

Yearbooks

5 *Items and form* An example illustrates the form used

Back, E. A. 1918 Danger of introducing fruit flies into the United States. U S Dept Agric Yearbook for 1917: 185-196

Yearbooks are not numbered as volumes, but only by years The actual time of publication—as shown in the example—is usually in the year following the period covered by the yearbook

Experiment station bulletins

6 *Items and form* In citing experiment station bulletins and other issues of serial publications bearing an individual number but no volume number the following form is used

Beath O A., H F Eppson and C S Gilbert 1935. Selenium and other toxic minerals in soils and vegetation Wyoming Agric Exper Sta Bull no 206 1-55

Dodge R., and F G Benedict 1915. Psychological effects of alcohol. Carnegie Inst. Washington Pub. no 232: 1-281.

SECOND METHOD

1 *Text reference to footnote citations.* The citations are given as footnotes, numbered consecutively (from 1 up) throughout the paper (in the order in which they are given in the text) and indicated in the text by superscript numerals. If other footnotes occur (except those in tables) they are numbered in the same series with the citations. A repeated reference is given the number of the original reference The superscript reference numeral to each footnote is placed in the text after the word or sentence to which the footnote refers It is put after a punctuation mark if there is one. The super script numeral is indicated by typewriting it above the line and putting a \-shaped mark under the numeral.

2. *Footnotes.* The footnotes are not inserted in the text, but are typewritten on separate sheets (as many as convenient on a sheet)[20] Each footnote is indented as a paragraph and is preceded by an Arabic numeral in parentheses corresponding to the reference number in the text. The sheets bearing footnotes are put at the end of the text copy each sheet marked with the word "Footnotes, enclosed in a circle.[21]

[20] *The Journal of the American Chemical Society* requires each footnote to be inserted as a separate line (or lines) immediately following the line of text containing the word to which it refers. The footnote may be set off by short rules from the text material above and below it.

[21] Superscript numerals are used in many journals for both text references and footnotes.

In some journals, numerals in parentheses in the text refer to citations at the end of the article which are numbered in the order of text reference or are alphabetized and then numbered.

Journals with numbered volumes

3 *Items and form* Each citation of a paper in a journal includes the following items

(a) *Arabic footnote reference number* in parentheses.

(b) *Initials and surname of author* followed by a comma.

(c) *Abbreviated name of serial publication* in italic type (indicated by underlining with a single straight line), followed by a comma. (Some journals use Roman, not italic) In the journals published by the American Chemical Society, the abbreviations given by *Chemical Abstracts* in its "List of Periodicals Abstracted" are used.

(d) *Volume number* followed by a comma, both in black-face type (indicated by underlining with a single wavy line)

(e) *Number of the page cited*—usually that of the first page of the article

(f) *Year of publication of the article* in parentheses, followed by a period

(1) W W Binkley and M. L. Wolfrom *Amer Chem. Soc., Jour* **68**, 2171 (1946)

(2) E. C Stoner, *Philosoph. Mag.*, [7] **36**, 803 (1945) (Note the series number in square brackets.)

(3) (a) C. S. Hanes *Roy Soc. (London) Proc* **B128**, 421 (1940) (b) **B129** 174 (1940) (Note the part designation B)

(4) G S. Hartley *Faraday Soc Trans* **30**, 444 (1934)

(5) S. E. Sheppard and A. L. Geddes *Jour Chem. Phys.*, **13** 63 (1945)

Books

4 *Items and form.* In citing books, the form shown by the following examples is used

(1) J W Mellor, "A Comprehensive Treatise on Inorganic and Theoretical Chemistry Longmans, Green and Co., New York 1931 Vol II p 341

(2) W. M. Clark, "The Determination of Hydrogen Ions," Williams & Wilkins Co., Baltimore, Md., 1928, pp. 204, 210.

(3) L. F. Fieser and M. Fieser, "Organic Chemistry," D. C. Heath and Co., Boston, 1944, pp. 475, 482.

(4) E. Pollard and W. L. Davidson, Jr., "Applied Nuclear Physics," John Wiley and Sons, New York, 1942, 224 pp.

Yearbooks

5. *Items and form.* The following example illustrates the form used:

(1) E. A. Back, *U. S. Dept. Agric. Yearbook*, 1917, 153 (1918).

Experiment station bulletins

6. *Items and form.* In citing experiment station bulletins and other issues of serial publications bearing an individual number but no volume number, the form shown by the following example is used.

(1) H. B. Vickery and G. W. Pucher, *Conn. Agric. Exper. Sta. Bull.*, 323 (1931).

ABBREVIATIONS OF PERIODICAL PUBLICATIONS*

In preparing literature citations, the author should base abbreviations of serials upon a careful study of those used by the publication in which his paper is to be printed. Capitalization, in particular, varies in different journals. A uniform style must be used throughout a single bibliography.

The rules given below are intended to make it as easy as possible for the readers of your article to look up the literature references in the library.

* Miss Margaret C. Shields, of the Fine Hall Library of Princeton University, has helped in the preparation of this section.

Journals with numbered volumes

3 *Items and form.* Each citation of a paper in a journal includes the following items

(a) *Arabic footnote reference number* in parentheses.

(b) *Initials and surname of author* followed by a comma.

(c) *Abbreviated name of serial publication* in italic type (indicated by underlining with a single straight line) followed by a comma. (Some journals use Roman not italic) In the journals published by the American Chemical Society the abbreviations given by *Chemical Abstracts* in its "List of Periodicals Abstracted" are used.

(d) *Volume number* followed by a comma both in black face type (indicated by underlining with a single wavy line)

(e) *Number of the page cited*—usually that of the first page of the article

(f) *Year of publication of the article* in parentheses, followed by a period.

(1) W W Binkley and M. L. Wolfrom *Amer Chem. Soc., Jour.*, 68 2171 (1946)

(2) E. C Stoner, *Philosoph. Mag* [7] 36, 803 (1945) (Note the series number in square brackets.)

(3) (a) C. S Hanes, *Roy Soc (London) Proc* B129, 421 (1940) (b) B129 174 (1940) (Note the part designation B)

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Books

4. *Items and form* In citing books, the form shown by the following examples is used

(1) J W Mellor, "A Comprehensive Treatise on Inorganic and Theoretical Chemistry Longmans Green and Co. New York, 1931 Vol 11 p 341

the latest form of the name of the society." This rule, which is italicized here for emphasis, applies also to publications of an academy, an institution, or a university.

Académie des sciences, Paris. Comptes rendus	Acad. des sci. Paris, Compt. rend.
American Medical Association. Journal	Amer. Med. Assoc., Jour.
Cambridge Philosophical Society. Proceedings	Cambridge Philos. Soc., Proc.
Deutsche chemische Gesellschaft. Berichte	Deut. chem. Gesellsch., Ber.
National Academy of Sciences. Proceedings	Nat. Acad. Sci., Proc.
Torrey Botanical Club. Bulletin	Torrey Bot. Club Bull.
U. S. Bureau of Standards. Bulletin	U. S. Bur. Standards, Bull.
U. S. Bureau of Standards. Journal of Research	U. S. Bur. Standards Jour. Res.
U. S. Bureau of Standards. Technical Papers	U. S. Bur. Standards, Tech. Papers

(*d*) "Learned societies and academies of Europe, other than English, with names beginning with an adjective denoting royal privilege are entered under the first word following the adjective. These adjectives, Kaiserlich, Königlich, Reale, Imperiale, etc., are abbreviated to K., R., I., etc., and are disregarded in the arrangement."

(*e*) "Colleges and universities having a geographical

1 Each abbreviated name should be based upon the complete name of the publication as used in library catalogues and as given in the *Union List of Serials* (a reference volume available in most libraries)

2 The name of a periodical publication should always begin with the key word under which the name is entered in all library lists. The sequence of words should therefore follow the rules used in the *Union List of Serials in Libraries of the United States and Canada* (Second edition, 3065 pages Winifred Gregory editor New York The H W Wilson Company 1943) With permission of the publisher of the *Union List* these rules are quoted below

(*a*) A serial not published by a society or a public office is entered under the first word not an article [*a*, *an the* or equivalent] of the latest form of the title."

Annual Review of Biochemistry	Ann Rev Biochem.
Annalen der Physik	Ann. d. Physik
The Botanical Review	Bot Rev
The Journal of Experimental Biology	Jour Exper Biol

(*b*) "A serial published by a society but having a distinctive title is entered under the title with reference from the name of the society

American Journal of Botany (published by the Botanical Society of America)	Amer Jour Bot.
Chemical and Engineering News (published by the American Chemical Society)	Chem and Engineer News
Science (published by the American Association for the Advancement of Science)	Science

(*c*) *The journals transactions proceedings etc., of a society are entered under the first word not an article of*

the rest of the title should be written so as to give a clue to the language or else the first word should be written in full. "Annalen," "Annals," and "Annual," are far apart in a large catalogue "Ann. d. Phys." might be either French or German.)

Use Amer Chem. Soc., Jour ; *not* J A. C. S
Use Arch. f. tech. Mess. *not* A. T M.

8. All important words in the full title should be included in the abbreviated title unless a key is readily available in the library (For example an abbreviated title consisting only of "Ber.," "Ann.," or "Compt. rend."—as used in *The Journal of the American Chemical Society*—may be meaningless to a student until he learns that a key is given by *Chemical Abstracts* in its "List of Periodicals Abstracted.")

9 Prepositions and articles should be omitted when their omission does not lead to obscurity

But use Soc de Biol., *not* Soc. Biol., *for* Société de Biologie *to avoid confusion with* Société Biologique.

10 Names of places and persons should not be abbreviated.

Cambridge Philosoph. Soc., Proc
Liebig's Ann. Chem.
Inst. Pasteur Bull.

But note that Amer (for American) Brit. (for British) Deut. (for Deutsche) and U S (for United States) are commonly used.

11 The following list shows some common abbreviations of words in the names of periodical publications

Abstracts	Abstr.	American	Amer
Academy	Acad.	Anales	An.
Agricultural	Agric	Analytical	Analyt.

designation are entered under the name of the city state, or country contained in the title ”

(*f*) “Observatories botanical and zoölogical gardens, etc , not having a distinctive name, are entered under the name of the place in which they are located, unless they are affiliated with a university, in which case they are entered under the name of the university ’

3 The vernacular should be used not a translation (Just as one looks for a book by Felix Klein under *Klein* and not *Small* or *Little*, so one must look for the Polish academy under its Polish name even though one can not pronounce it, it should be used in written citations.)

Use Lund Observ Meddel *not* Contributions of the Observatory of Lund
Do not use Acad. *for* Akad *or* Accad

4. *An editor's name should be avoided unless it is* officially in the title.

Ann. d Physik, ser 2 *or* Ann. d Physik [2] *not* Poggendorff's Annalen.
But Pflüger's Archiv *is correct.*

5 When publications of an institution are organized in parts the section or division designation should be included.

Math. Phys Kl *or* Sect 1 *etc*

6. The series number should always be given in case the set is numbered in series.

Philosoph Mag ser 7 *or* Philosoph Mag [7]

7 Abbreviation of words—particularly the first—should not be carried too far (In such cases as Ann 'Biol.,' or 'Geol when this is the first word either

the rest of the title should be written so as to give a clue to the language, or else the first word should be written in full. "Annalen," "Annals," and "Annual," are far apart in a large catalogue "Ann. d. Phys." might be either French or German.)

Use Amer. Chem. Soc., Jour ; *not* J. A. C. S.
Use Arch. f. tech. Mess. *not* A. T. M.

8. All important words in the full title should be included in the abbreviated title, unless a key is readily available in the library (For example an abbreviated title consisting only of "Ber.," "Ann.," or "Compt. rend."—as used in *The Journal of the American Chemical Society*—may be meaningless to a student until he learns that a key is given by *Chemical Abstracts* in its "List of Periodicals Abstracted.")

9. Prepositions and articles should be omitted when their omission does not lead to obscurity

But use Soc. de Biol. *not* Soc. Biol., *for* Société de Biologie *to avoid confusion with* Société Biologique

10. Names of places and persons should not be abbreviated.

Cambridge Philosoph. Soc., Proc.
Liebig's Ann. Chem.
Inst. Pasteur Bull.

But note that Amer. (for American) Brit. (for British) Deut. (for Deutsche) and U. S. (for United States) are commonly used.

11. The following list shows some common abbreviations of words in the names of periodical publications

Abstracts.	Abstr.	American	Amer.
Academy	Acad.	Annales.	An.
Agricultural	Agric.	Analytical.	Analyt.

Anatomical	Anat	Engineering	Engineer
Annalen	Ann	Ergebnisse	Ergebn.
Annals	Ann.	Ethnology	Ethnol.
Anthropological	Anthropol	*Experiment*	*Exper*
Anzeiger	Anz	Experimental	Exper
Association	Assoc.	Experimentale	Exper
Archiv	Arch		
Archives	Arch	für	f
Archivio	Arch		
Astronomical	Astron	Gazette	Gaz.
		Gazzetta	Gazz
Bacteriology	Bacteriol	Genetics	Genet.
Bakteriologie	Bakteriol	Geographical	Geogr
Beiträge	Beitr	Geological	Geol
Berichte	Ber	Geologische	Geol
Biochemical	Biochem	Gesellschaft	Gesellsch
Biological	Biol		
Biologie	Biol	History	Hist
Biologique	Biol		
Botanical	Bot.	Industry	Indus
Botanik	Bot	Institute	Inst.
Botanisches	Bot	International	Internat.
Botany	Bot		
British	Brit.	Jahrbuch	Jahrb
Bulletin	Bull	Jahresbericht	Jahresb
Bureau	Bur	Journal	Jour
Centralblatt	Centralbl	Magazine	Mag
Chemical	Chem.	Mathematics	Math.
Chemistry	Chem.	Mechanical	Mech
Clinical	Clin	Medical	Med.
Comptes	Compt	Medicine	Med
Contributions	Contr	Monographs	Monogr
		Monthly	Month.
Deutsche	Deut	Morphologisches	Morphol
Diseases	Dis.	Morphology	Morphol.
Ecology	Ecol	National	Nat.
Economics	Econ.	Natural	Nat.
Electric	Elec	Neurology	Neurol

Paleontologie	Paleontol.	Science	Sci.
Paleontology	Paleontol.	Scientific	Scient.
Pathology	Pathol.	Sciences	Sci.
Pharmacology	Pharmacol.	Service	Serv
Philosophical	Philosoph.	Society	Soc.
Physical	Phys.	Station	Sta.
Physikalische	Physikal.	Surgery	Surg.
Physiological	Physiol.	Survey	Surv
Political	Polit.		
Proceedings	Proc.	Technology	Technol.
Protistenkunde	Protistenk.	Therapeutics	Therap.
Psychological	Psychol.	Transactions	Trans.
Psychology	Psychol.	Tropical	Trop.
Publication	Pub.		
		United States	U S
Quarterly	Quart.	und	u.
		Verhandlungen	Verhandl
Record	Rec		
Report	Rept.	Zeitschrift	Ztschr
Research	Res.	Zeitung	Ztg.
Review	Rev	Zentralblatt	Zentralbl.
Revue	Rev	Zoologie	Zool.
Rivista	Riv	Zoologischer	Zool.
Royal	Roy	Zoology	Zool.

ABSTRACTS AND QUOTATIONS

ABSTRACTS

1 *Form.* Reference to a cited publication should usually be made in the form of an indirect quotation or a brief abstract that summarizes the discussion presented in the original publication.

2 *Credit.* Always give credit for ideas taken directly from any publication.

3 *Citation.* A citation of each article mentioned must appear in your literature cited or in a footnote.

4 *Punctuation.* Indirect quotations should not be inclosed in quotation marks.

Anatomical	Anat.
Annalen	Ann
Annals	Ann
Anthropological	Anthropol
Anzeiger	Anz
Association	Assoc
Archiv	Arch
Archives	Arch
Archivio	Arch
Astronomical	Astron.
Bacteriology	Bacteriol
Bakteriologie	Bakteriol
Beiträge	Beitr
Berichte	Ber
Biochemical	Biochem
Biological	Biol
Biologie	Biol
Biologique	Biol
Botanical	Bot.
Botanik	Bot
Botanisches	Bot
Botany	Bot.
British	Brit.
Bulletin	Bull
Bureau	Bur
Centralblatt	Centralbl
Chemical	Chem
Chemistry	Chem
Clinical	Clin.
Comptes	Compt
Contributions	Contr
Deutsche	Deut.
Diseases	Dis.
Ecology	Ecol
Economics.	Econ.
Electric	Elec
Engineering	Engineer
Ergebnisse	Ergebn.
Ethnology	Ethnol
Experiment	Exper
Experimental	Exper
Experimentale	Exper
für	f
Gazette	Gaz.
Gazzetta	Gazz
Genetics	Genet.
Geographical	Geogr
Geological	Geol
Geologische	Geol
Gesellschaft	Gesellsch.
History	Hist.
Industry	Indus
Institute	Inst.
International	Internat.
Jahrbuch	Jahrb.
Jahresbericht	Jahresb
Journal	Jour
Magazine	Mag
Mathematics	Math
Mechanical	Mech
Medical	Med
Medicine	Med
Monographs	Monogr
Monthly	Month.
Morphologisches	Morphol
Morphology	Morphol
National	Nat
Natural	Nat
Neurology	Neurol

Paleontologie	Paleontol.	Science	Sci.
Paleontology	Paleontol	Scientific	Scient.
Pathology	Pathol.	Scienze	Sci.
Pharmacology	Pharmacol.	Service	Serv
Philosophical	Philosoph.	Society	Soc
Physical.	Phys.	Station	Sta.
Physikalische.	Physikal.	Surgery	Surg.
Physiological	Physiol.	Survey	Surv
Political	Polit.		
Proceedings.	Proc	Technology	Technol.
Protistenkunde	Protistenk.	Therapeutics	Therap.
Psychological	Psychol.	Transactions	Trans.
Psychology	Psychol.	Tropical	Trop
Publication.	Pub		
Quarterly	Quart.	United States	U. S.
		and	u.
Record	Rec.	Verhandlungen	Verhandl.
Report	Rept.		
Research	Res.	Zeitschrift	Ztschr
Review	Rev	Zeitung	Ztg.
Revue	Rev	Zentralblatt	Zentralbl.
Rivista	Riv	Zoölogie	Zoöl.
Royal	Roy	Zoölogischer	Zoöl.
		Zoölogy	Zoöl.

ABSTRACTS AND QUOTATIONS

ABSTRACTS

1 *Form.* Reference to a cited publication should usually be made in the form of an indirect quotation or a brief abstract that summarizes the discussion presented in the original publication.

2. *Credit.* Always give credit for ideas taken directly from any publication.

3. *Citation.* A citation of each article mentioned must appear in your literature cited or in a footnote.

4. *Punctuation.* Indirect quotations should not be inclosed in quotation marks.

QUOTATIONS

1 *Permissions.* Written permission must be obtained from the copyright owner before printing or otherwise reproducing material from a copyrighted publication.

2 *Form* When direct quotations are needed they should be enclosed in quotation marks, and should reproduce the exact words of the original publication, including all details of spelling capitalization and punctuation. Corrections or remarks inserted by the one who quotes must be placed in square brackets [ ] Omissions must be indicated by a series of four periods. The author should carefully compare the typewritten copy with the original printed matter this should be done each time the manuscript is copied

3 *Short quotations* A short quotation should not appear as a separate paragraph. It should be enclosed in quotation marks, and included in a paragraph of your manuscript.

4 *Long quotations* A quotation of more than five or six lines should be given as a separate paragraph. In the manuscript a quotation of this kind should be enclosed in quotation marks The publisher usually will omit the quotation marks and print the quotation in smaller type than that used for the text.

Each long quotation should be typewritten upon one or more separate sheets of paper that are numbered consecutively with the text pages. The method of preparing the copy is as follows When the place is reached where a long quotation occurs remove the text sheet from the typewriter and begin the quotation upon a separate sheet numbered as a new page Finish typewriting the quotation using as many sheets as necessary and numbering them as manuscript pages. Then put

a new sheet of paper in the typewriter and continue with the text.

The reason for using this method is that it allows the article to be composed economically on the typesetting machine, which will not set two different sizes of type in one operation. When the manuscript is not prepared in this way it is necessary for the compositor to handle all of the copy twice thus causing needless waste of valuable time.

It is advisable to mark clearly the sheets bearing quotations this may be done by writing the word "Quotation," enclosed in a circle, in the upper left-hand corner

5. *Quotation within a quotation.* Use single quotation marks for a quotation within a quotation.

ACKNOWLEDGMENTS

Acknowledgments of help received from others should be made with simplicity and tact. An effusive acknowledgment may be very embarrassing to your critic or adviser It is fitting, of course that mention be made of suggestions, criticisms, or other forms of help that you have received, but this should be done in an appropriate way The form of acknowledgment and its place in the paper should be determined by the usual practice in the journal in which your article is to be published. Acknowledgment may be made by a brief statement appearing in a footnote to the title of the article. The form for a thesis may be "Prepared in the Department of ________________ under the direction of Professor ________________." If persons other than the adviser have helped, mention of the fact may be made in the form of footnotes in the parts of the paper concerned. Another suitable place for acknowledgments is in the introduction to the paper

PREPARATION OF AN ANALYTICAL TABLE OF CONTENTS

1 *Analytical outline* Before a manuscript is offered for publication, an analytical outline or table of contents, should be prepared The outline is of advantage in two ways (*a*) It aids you in making the final revisions of your paper, especially in preparing correct headlines. (*b*) It is almost indispensable to anyone reading your manuscript with the object of criticizing it.

2. *Form of outline* The outline that follows will serve as an example of an analytical table of contents. The rank of the headings for the various divisions of an article should be indicated in the table of contents by graded indentations. Note that the principal divisions are begun flush with the left hand edge of the writing the subdivisions of the principal divisions are indented 5 spaces on the typewriter and smaller subdivisions are indented 10 spaces.

Indicate properly the comparative values of the topics If two topics are logically coördinate do not make one topic subordinate to the other On the other hand if one topic is logically subordinate to another, do not give them equal value.

Example of analytical table of contents

CONTENTS

Abstract 1
Introduction 1
Materials and methods 2
    Plants 2
    Culture methods 3
    Measurement of climatic conditions 4
Experiments and results 6
    Plant yields 7
    Climatic data 8

Discussion of results 10
General considerations 10
Relation of yields to climatic conditions 11
Temperature 11
Rainfall 13
Evaporation 15
Literature cited 17

HEADINGS IN THE TEXT OF A PAPER

1. *Use of outline in revising headings.* The analytical outline, prepared as described above, should be used as a basis for revising, if necessary the headings that appear in the text of your paper and for indicating the rank of the headings. The editor will mark the manuscript to indicate the sizes and styles of type for headings.

2. *Indication of center headings in text.* In the text, or body of the paper the headings indicating principal divisions of the article should be typewritten in capitals as center headings. In the example "Introduction," "Materials and methods," "Experiments and results," "Discussion of results," and "Literature cited" indicate the headings of the main sections of the paper

3. *Indication of center subheadings in text.* The headings indicating subdivisions should be typewritten as center headings in small (lower-case) letters only the first word and proper nouns should have capital initials. In the sample outline, "Plants," "Cultural methods," "Measurement of climatic conditions," etc., indicate the center subheads.

4. *Indication of paragraph side headings.* Still smaller subdivisions should appear as side heads, indented as paragraphs. The side head is "run in"—that is, run together in a continuous line with the paragraph to which it belongs. Only the first word and proper nouns should

have capital initials. A single straight line should be drawn under each side head to indicate that it is to be printed in italics, a period should follow the side head. In the example "Temperature,' "Rainfall' and 'Evaporation' indicate the paragraph side heads.

5 *Over minute subdivision.* Excessive subdivision of the text should be avoided since it confuses rather than aids the reader three grades (center heads center subheads, and paragraph side heads) are enough.

In the early drafts of a paper it is desirable to show clearly the principal divisions and their subdivisions, and so these three grades of headings are usually employed. But in making the final revision for publication try to avoid the use of center subheads let the main divisions of the paper appear as center heads, and the subdivisions appear as paragraph side heads. Even center heads should be used sparingly

6 *Styles of type for center headings.* As a rule, the author should not mark the manuscript to indicate the styles of type for center headings, unless he is preparing copy ready for the printer The author should indicate only the rank of the headings as suggested above. The following outline summarises a style often used. This style has the advantages of being pleasing to the eye and economical because composed with the text, in one operation.

CENTER HEADINGS (SMALL CAPS OF TEXT TYPE)

Center subheads (lower-case italics of text type)

Another style avoids the use of center headings. Only paragraph side headings are used—small caps for main headings and lower-case italics for subheadings

ILLUSTRATIONS

Illustrations form an integral part of the concise and effective presentation of scientific material. They serve as a short-cut means of presenting descriptive matter and of showing relationships among data. By looking at an illustration, the reader gains information that he would otherwise have to procure from a long verbal explanation. He is able to obtain from an illustration a clear conception of objects or relationships that are too complex to be adequately described in words. If the paper is suitably illustrated, the text may be largely devoted to discussion of principles, comparisons and inferences. Photographs and drawings are especially important in the descriptive phases of science. Diagrams of apparatus and graphs of data are mainly required in the experimental and quantitative phases.

The first impression a reader gets of an article is greatly influenced by the appearance of the illustrations. He is likely to receive an unfavorable impression of the whole article if the illustrations are poor. But he is attracted to the article if the illustrations are accurate, clear, and artistic. It is very important, therefore, to devote much time and study to the planning and preparation of illustrative material. Special attention should be given to uniformity in style, tone, and lettering. For putting drawings and graphs into final form, the services of a professional artist or draftsman are likely to be needed.

CORRECT PROPORTIONS

An illustration with dimensions approximating $1 \times 1\frac{1}{2}$ is most pleasing to the eye. The appearance of the page is best and the printer's work is facilitated if every illustration has the same width as the type page or type

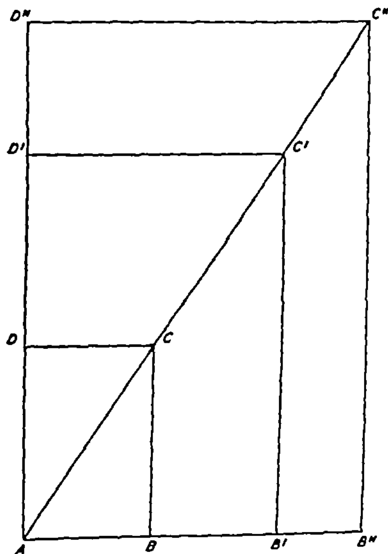


FIG 1 Diagram showing method of securing correct proportions for an illustration.

column. For a journal printed in two columns, illustrations should usually be designed to occupy the width of a single column, and should therefore be tall rather than wide.

A convenient graphical method of securing the correct proportions for a page-size illustration is shown in figure 1. On a large sheet of Bristol board construct, in pencil, a rectangle $ABCD$ which is the size of the desired reproduction. This is usually the same width as the type page or column but is enough shorter to allow space for the printed legend. Extend the diagonal AC as far as you wish on the Bristol board. Any point on the diagonal will determine a rectangle that has the correct proportions of width and length. For example, the point C' determines the correct rectangle $AB'C'D'$; the point C'' determines the correct rectangle $AB''C''D''$; etc.

A similar procedure is used if the reproduction is to occupy only a part of the height or width of the type page. The original, small rectangle is always made the exact size of the intended reproduction.

A completed illustration may easily be checked to determine whether its width or its height must determine the reduction. Cut a rectangular piece of cardboard to the exact size of the type page or type column. Place it on the illustration in the position of $ABCD$ in figure 1 and lay a long ruler on the illustration so as to extend the diagonal AC. Then, (a) if the ruler intersects the side of the illustration, the *height* must be reduced to that of the type page or column, or (b) if the ruler intersects the *top* of the illustration, the *width* must be reduced to that of the type page or column.

DRAWINGS[a]

1 *Methods of reproduction* Drawings are usually reproduced by means of zinc etchings, or by the more expensive half-tone and photo-gelatine processes. Before the original drawing is made, it is necessary to know what method of reproduction will be used how much the drawing will be reduced and on what type of paper it will be printed. Where possible drawings should be prepared in a way that will allow them to be reproduced by the relatively inexpensive zinc etchings. Half tones cost about twice as much and photo-gelatine prints (also called heliotype or collotype) usually cost from five to fifteen times as much as zinc etchings.

2 *Plates and text figures* Drawings may be used either as plates or as text figures. Plates are often printed on glossy paper as separate pages and may be put at the end of the article Text figures are printed on the same paper as the text and often have text material above or below them Many journals use the same paper for all illustrations and prefer to treat them all as text figures. As many figures as desired may be grouped together

3 *Paper and ink* Pure white three-ply Bristol board and undiluted black waterproof India ink should be used in preparing drawings. If a drawing has been made on thin paper it should be transferred to Bristol board by blackening the back with a soft pencil and tracing over the drawing with a hard pencil. Drawings should first be worked out in detail in pencil and later inked in.

4 *Size of drawing* The width or length of the original drawing should be from two to four times that of the

[a] Three excellent books on scientific drawings are Mueller's *A Manual of Drawing for Science Students* Ridgway's *Scientific Illustration* and *The Wistar Institute Style Brief*

reproduction. Slight inaccuracies in lines become invisible when reduced. Standard enlargements should be used for drawings in the same article so as to insure ready comparability

5. *Shading for zinc etchings.* For reproduction by zinc etchings, any shading that is desired should be done by means of black dots or lines made with undiluted India ink. Darker shades are best produced by putting the dots closer together rather than by increasing the size of the individual dots. Very fine lines or extremely small dots cannot be reproduced by this process they will be lost unless they are clear and distinct. If they are placed too close together they may blur and appear as solid blotches when the drawing is reduced in size. There is a greater tendency for blurring to occur when the drawing is printed on a soft or rough-surfaced paper than when it is printed on a hard or glossy-surfaced paper In the original drawing, the shading should be kept rather open. A light drawing is more attractive than a dark one. Many of the best drawings are mere outlines, made with very few carefully chosen lines. Elaborate drawings are rarely necessary

Rather delicate shading can be obtained if the size and spacing of the dots are properly adjusted to the degree of reduction in the zinc etching and to the type of paper used in printing. If possible sample drawings that have given good results should be studied. Each laboratory should preserve original drawings, together with their reproductions, for the guidance of other workers. Examination of the drawing through a reducing lens is helpful, but the final test is the reproduction itself In case of doubt, it will pay to have one of the drawings reproduced before proceeding with the preparation of the rest.

Copper etchings, which cost about twice as much as

zinc etchings, permit the reproduction of somewhat finer lines and smaller dots.

6 *Shading for half-tones.* If it is essential to show gray tones or extremely fine details, very delicate shading may be done with several dilutions of India ink, and the drawings can be reproduced by the half-tone process (p 106) or by the photo-gelatine process. Wash and brush drawings, made with water-color or diluted India ink, can be reproduced in the same way India ink, once applied, cannot be lightened, but water-color can be partially removed by strokes with a brush dipped in water Pure white Bristol board should be used—never cardboard with a cream or yellow tint

Many beginners are most successful in shading with so-called carbon pencils, which come in several grades. The effect of gradation from light to dark may be attained by "smudging the border region between two shades with the aid of a 'stub' But the range of shades obtainable with pencils is more limited than that with India ink or water-color And it must not be forgotten that the finished drawing may be blurred and ruined by careless handling This may be avoided by spraying the finished drawing with a colorless shellac (without any yellow tint)

7 *Economy in grouping* As many as possible of the illustrations should be grouped and mounted close together on heavy white cardboard, so that they may be reproduced as a single cut. Each plate may include a number of figures, and several text figures may be mounted in a group Grouping is economical because the photo-engraver's charge for one-half page is about three-quarters of that for a full page and his minimum charge for small figures is about one-half the charge for a full page

8 *Grouping for zinc etchings* For reproduction by a

zinc etching, the separate drawings should be trimmed and arranged carefully within a rectangle of proper size and proportions, drawn in pencil on a sheet of stiff white cardboard (about $\frac{1}{16}$ inch thick). The trimmed edges of the drawings will not appear in the zinc etching. When the best arrangement has been secured the figures should be pasted to the cardboard, using rubber cement or thick white paste that will neither discolor nor wrinkle the Bristol board.

Figure numbers and explanatory letters should be put in proper places. Capital letters (for major parts or units) and lower-case letters (for minor parts or units) are used to designate points, lines, objects etc., in drawings. Care should be taken to have the numbers and letters set straight and duly separated from the drawings. They should be neat avoid heavy black-face characters. Their size should be such that they will be $\frac{1}{16}$ or 63 thousandths of an inch high in the reproduction. It is best to paste on printed characters, or to put them on the drawing in ink, with the aid of Wrico lettering guides or Leroy lettering equipment (see table 7)

9. *Grouping for half-tones.* Special precautions need to be taken in the trimming and mounting of a group of drawings for half-tone reproduction. The trimmed edges always show in the half-tone usually as dark lines. If possible the pieces of Bristol board bearing the drawings should be cut into rectangles or polygons that fit together perfectly and completely cover the stiff white cardboard on which they are mounted. The size and proportions of the whole group should be determined as described on page 105. In mounting the figures, use rubber cement or thick white paste The photoengraver will cut thin white lines to separate the individual rectangles or polygons. If mounting is done improperly it will be necessary

zinc etchings, permit the reproduction of somewhat finer lines and smaller dots.

6 *Shading for half tones* If it is essential to show gray tones or extremely fine details, very delicate shading may be done with several dilutions of India ink, and the drawings can be reproduced by the half-tone process (p 106) or by the photo-gelatine process. Wash and brush drawings, *made with water-color or diluted India ink*, can be reproduced in the same way India ink, once applied cannot be lightened, but water-color can be partially removed by strokes with a brush dipped in water Pure white Bristol board should be used—never cardboard with a cream or yellow tint.

Many beginners are most successful in shading with so-called carbon pencils which come in several grades. The effect of gradation from light to dark may be attained by "smudging" the border region between two shades with the aid of a "stub" But the range of shades obtainable with pencils is more limited than that with India ink or water-color And it must not be forgotten that the finished drawing may be blurred and ruined by careless handling. This may be avoided by spraying the finished drawing with a colorless shellac (without any yellow tint)

7 *Economy in grouping* As many as possible of the illustrations should be grouped and mounted close together on heavy white cardboard, so that they may be reproduced as a single cut. Each plate may include a number of figures and several text figures may be mounted in a group Grouping is economical because the photo-engraver's charge for one-half page is about three-quarters of that for a full page and his minimum charge for small figures, *is about one-half the charge for a full page*

8. *Grouping for zinc etchings* For reproduction by a

can be reproduced well by Photostat copies and other photographic methods.

The simplest method of preparing such a drawing is to trace it from a print made on 8 × 10 inch or larger single-weight paper. A sheet of translucent drawing vellum is placed over the print, and a light is put below it for transillumination (see description of table for tracing, page 119). The desired lines are then traced in pencil on the drawing vellum. Details that are not wanted are not traced. It is easy to study the progress of the drawing and to dissociate it from the photograph merely by turning off the light and observing the drawing by reflected light alone. Any shading that is desired may be put in with stippling or hatching, as in making ordinary pen drawings. Measurements, explanatory letters, and labels may be inserted. After the drawing has been completed in pencil, it is inked in. The width of the ink lines must be properly related to the reproduced size of the drawing.

GRAPHS[25]

Graphs are designed to portray relationships existing among data. They must be accurate and they should also be clear. Since the ease with which the relationships may be seen depends upon balance and other features of good composition, graphs should be constructed so as to be pleasing to the eye. The suggestions given below are intended as guides in the achievement of effective presentation.[26] Figures 2–8 exemplify some of these suggestions.

[25] Professor Francis J. Ryan, of Columbia University, has helped in the preparation of this section.

[26] A comprehensive discussion of the representation of data by tables, graphs, and equations is given in Worthing and Geffner's Treatment of Experimental Data.

to have the whole background routed out or to use highlight half tones, thus doubling or trebling the cost of reproduction. Failure to observe proper precautions in trimming and mounting is the most common cause of untidy appearance and unnecessary expense in half tone reproduction.

Figure numbers and explanatory letters may be put directly on the original drawings, with the aid of a Wrico or a Leroy guide (see table 7) Printed characters, attached with rubber cement, may be used if all the slips of paper bearing them are of the same size, trimmed square, and set straight.

DRAWINGS FROM PHOTOGRAPHS[14]

A line drawing may be made from a photograph. For illustrating a piece of scientific apparatus, such a drawing may be much better than a photograph, because the drawing shows only the points that are essential and omits unnecessary and confusing details. Hidden parts can be shown by cut-away sections. A very natural perspective may easily be obtained in a drawing based on a photograph. The technique is simpler and quicker than the freehand method This method may be used for any type of subject matter and the drawing may be a simple outline or a realistic picture The final result is limited only by the skill of the draftsman An excellent drawing may be made from a relatively poor photograph. The line drawing is reproduced by means of a zinc etching. It costs less to publish than a half tone, and the quality of the reproduction can be better predicted. If a limited number of copies of a report are needed, a line drawing

[14] Mr John W McFarlane, of the Eastman Kodak Company has helped in the preparation of this section

1. *Paper and ink.* Curves and other types of graphs are reproduced as zinc etchings, and should be made with black waterproof India ink on coördinate paper or tracing cloth ruled with blue lines. In reproduction the blue lines will be "screened out," leaving only the black ink lines. Any coördinate lines that are to appear in the reproduction must be drawn in black ink. Paper for graphs should be of good enough quality to take India ink well and stand erasure. A satisfactory paper is a sheet 16 by 21 inches ruled with broad blue lines into 1-inch squares, each of which is subdivided by thin blue lines into $\frac{1}{10}$-inch squares (Eugene Dietzgen no. 300 or Keuffel and Esser no. 280G). Coördinate paper ruled into equal squares is suitable for most types of graphs, including logarithmic graphs, in which only the principal coördinates are to be shown. For some purposes, paper with semi-log or log-log rulings is necessary or more convenient. Papers ruled with green, orange red, yellow or black lines are unsatisfactory unless it is desired that all lines be reproduced or unless the graph is to be transferred to white illustrating or Bristol board, white paper or tracing cloth. If all coördinate lines are to appear in the reproduction, special care should be taken to use a paper in which the lines (preferably black) contrast sharply with the white background.

2. *Size and proportions of the graph.* The suggestions made regarding the size and proportions of drawings apply also to graphs. Proportions of length to width approximating 1 1½ are most pleasing in appearance. The length or width of the original graph should be from two to four times that of the desired reproduction. This size is convenient for the use of lettering guides. Many journals prefer to have the reproduction occupy the full width of the type page or the full width of a single column

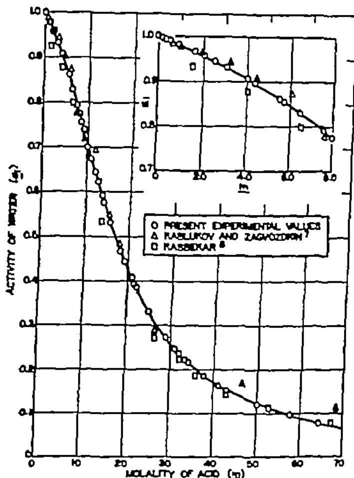


FIG 2. Activity of water over orthophosphoric acid solutions at 25°C (*Elmore K L C M Mason and J H Christensen 1946 Amer Chem. Soc Jour 68 2528–2532*)

Plotted from data of table 2 page 59

A graph should always be drawn first in pencil and then inked in. In this way the most satisfactory composition may be attained before the graph is made permanent.

required for printing, will be neither crowded nor wasteful of space. It is desirable to use the same scale in a series of comparable graphs. If the graph is to be used as a source of quantitative data, the scale and precision should be such as to allow the coördinates of any point to be read

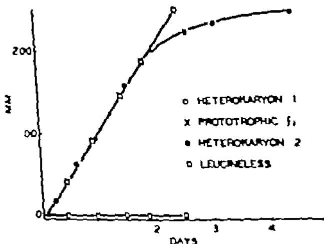


FIG. 4. Growth rates of heterokaryons of leucineless and adapted *Neurospora crassa* and of the separate components on minimal agar medium devoid of leucine at 25°C. (*Ryan, F. J., and J. Lederberg.* 1946. *Nat. Acad. Sci. Proc.* 32: 163–173.)

quickly and accurately. But if the graph is presented to illustrate the nature of the relationship between two variables, a smaller scale may be used. Many of the graphs in scientific papers are of this type especially where the original data are presented in tables.

It may be desirable to try to find a method of plotting that will give a straight line. If this can be done, it may give a clue to the nature of the relationship between the

of a two-column page. A part or all the height of the type page may be utilized. The final reproduction should have a large enough scale to show essential details and accommodate necessary numbers and labels

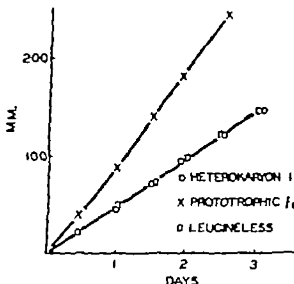


FIG. 3. Growth rates of a heterokaryon of leucineless and adapted *Neurospora crassa* and of the separate components on a limiting concentration of *l*(+)leucine (0.0075 mg./ml) at 25°C (*Ryan F J and J Lederberg 1946 Nat. Acad. Sci., Proc 32 163–173*)

Plotted from data of table 3 page 60

3 *Choice of coördinates.* It is customary to plot the independent variable on the horizontal axis and the dependent variable on the vertical axis. But it is not always possible to distinguish between the two kinds of variables. Intervals of time are usually plotted on the horizontal axis.

4 *Scale of coördinates.* The scale of coördinates should be chosen so that the graph, when reduced to the size

always be clearly shown on the curves. But computed points, plotted from a mathematical equation, should not be shown.

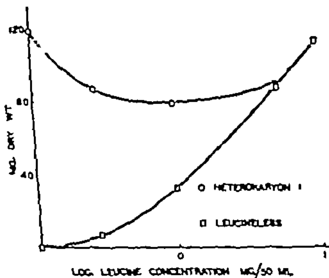


FIG. 5. The final growth of a heterokaryon of leucineless and adapted *Neurospora crassa* and of the leucineless mold alone on different concentrations of $l(+)$leucine in liquid medium at 25°C. (Ryan, F. J. and J. Lederberg. 1946. *Nat. Acad. Sci., Proc.* 32: 163–173.)

6. *Drawing the curve.* Where possible a smooth curve should be drawn to represent the plotted points. Smoothing shows relationships most clearly and minimizes errors. Of course, if the points are widely or irregularly distributed, all that can be done is to connect them with straight lines.

In drawing a smooth curve by hand, use light sweeping

two variables[a] If the ordinary graph is straight the relationship follows the linear law ($y = ax + b$) if a log-log graph is straight, it follows the power law ($y = Kx^n$) or if a semi log graph is straight, it follows the compound interest law ($y = Pe^{rx}$) In many cases, of course none of these graphs is straight and the mathematical relationship between the two variables is more complex.

It is desirable to choose the coördinates so that the important part of the curve approximates a slope of unity—i.e , makes an angle of about 45° with the horizontal axis.

Round numbers—multiples of 5 10 20 etc —are put on the heavy lines of coördinate paper ruled in the decimal system. In logarithmic plots, either the logarithms of the numbers or the numbers themselves may be used depending upon which scheme is clearer or more useful The coördinate scales should be labeled so as to indicate clearly the name of the quantity plotted and the unit of measurement. These labels should be balanced near the middle of the axes and should not be crowded too close to the numbers on the scale The label on the vertical axis should be oriented so that it is read upward along this axis.

5 *Plotting the points* The points are plotted with a sharp pencil, each point being surrounded by a circle or other symbol Different symbols, such as open and closed circles, triangles, and squares, may be used to distinguish several curves in the same graph, or several sets of data for a single curve. After the points have been plotted all should be carefully checked Observed points should

[a] Many readers prefer curves made from the original data since they find it difficult to visualize relationships when the logarithms of the variables are plotted

always be clearly shown on the curves. But computed points, plotted from a mathematical equation, should not be shown.

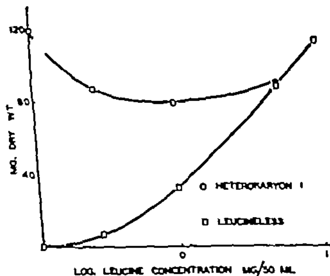


Fig. 5. The final growth of a heterokaryon of leucineless and adapted *Neurospora crassa* and of the leucineless mold alone on different concentrations of l(+)leucine in liquid medium at 25°C. (Ryan, F. J. and J. Lederberg 1946 *Nat. Acad. Sci., Proc.* 32: 163–173.)

6. *Drawing the curve* Where possible, a smooth curve should be drawn to represent the plotted points. Smoothing shows relationships most clearly and minimizes errors. Of course, if the points are widely or irregularly distributed, all that can be done is to connect them with straight lines.

In drawing a smooth curve by hand, use light sweeping

strokes with a pencil Obtain a satisfactory curve by erasure and correction The smoothed curve need not pass through all the points, but it should be drawn so

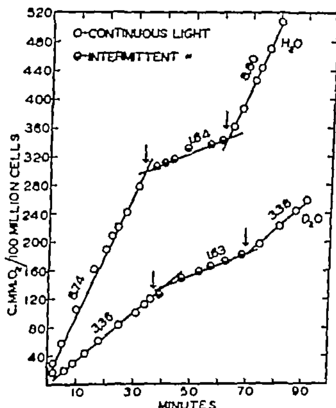


FIG. 6 Influence of deuterium oxide on the rate of photosynthesis of *Chlorella vulgaris* in continuous and in intermittent illumination. (*Pratt R., and S F Trelease 1938 Amer Jour Bot 25 133-139*)

that about half the points in a group fall on each side of it. To detect kinks that require correction sight with one eye along the curve

Some workers like to draw the smoothed curve on a

piece of tracing paper held over the graph with drafting tape or rubber cement. The curve may then be transferred to the original by blackening the back of the paper with a soft pencil and tracing over the curve with a hard pencil. Another method of transferring the curve involves mounting the tracing paper with rubber cement on a piece of moderately thick cardboard and then cutting with scissors along the curve. The cardboard template is used in drawing the curve in pencil on the original graph. A very regular curve, free from waviness, may be obtained in this manner

Several curves may be drawn in the same graph, but they should not be so numerous or so crowded as to make the graph difficult to decipher The curves may be distinguished by different symbols representing the points and by different kinds of lines—solid long dash, short dash, dot and dash, etc. The individual curves may be designated by capital letters (usually italic) or preferably by distinctive labels along the curves. The curves can be identified by means of a key placed in a balanced position in the graph, or by reference in the figure caption to the explanatory letters or to the types of lines and symbols.

If it has been necessary to plot the graph on coördinate paper ruled with orange or green lines that are not wanted in the reproduction, the graph must be transferred to white illustrating board or three-ply Bristol board (by means of needle pricks) or to translucent bond paper or tracing cloth before it is inked. A convenient table for use in tracing graphs may be easily constructed by cutting a rectangular opening (17 by 22 inches) in a table and mounting above the opening a countersunk sheet of ground plate-glass (20 by 25 inches) the glass may be illuminated by a 300-watt lamp in a goose-neck

stand resting on the floor (A small illuminated desk, designed for tracing illustrations on mimeograph stencils,

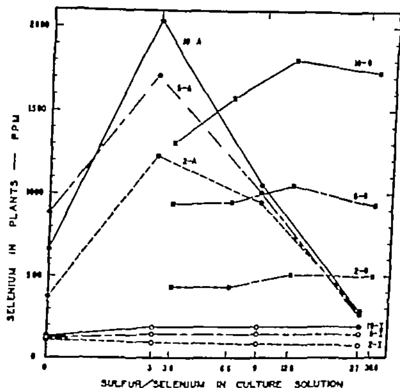


FIG 7 Selenium accumulation by maize in relation to sulfur/selenium ratio (in ppm) in the culture solution (Log scale of abscissas except the zero)

Cultures received 2 5 and 10 ppm of selenium as selenate (*A*) selenite (*I*) or organic selenium (*O*) from an *Astragalus* extract. Sulfur supplied as sulfate (*Trelease S F and S S Greenfield*)

may be purchased in stationery stores.) The graph and paper or cloth may be held together and fastened to the glass with drafting tape or rubber cement.

Inking the graph. Inking in the graph is the part of the work that is best done by a professional draftsman. India ink must always be used. The symbol surrounding each point is inked first. It should be about three times as wide as the curve that will be drawn; the point at the center of the symbol is not inked. Circles are made with a compass, preferably of the type known as a drop bow pen; squares and triangles are made with a lettering pen and guide. Lines are drawn with a ruling pen or Wrico lettering pen. Straight lines are drawn with the aid of a transparent triangle or straight-edge. Difficulty caused by the ink's running under the triangle may be avoided by putting some strips of adhesive tape on the lower side of the triangle.

Smoothed curves may be drawn most easily with the aid of a flexible curve ruler, which may be obtained from either the Eugene Dietzgen Co. or the Keuffel and Esser Co. This ruler may be bent to the shape of almost any curve and will retain its form until further distorted. It has the added advantage of being so constructed that the ink will not run under its edge. Curves may also be drawn with the aid of French curves, elevated from the paper by strips of adhesive tape. For best appearance, the curve should not run through the point symbols but should be drawn to join them, or it may even be separated from them by short breaks.

Points falling on the axes should rest in small gaps left in these lines. Where a series of points fall along the horizontal axis, it is best to depress the line representing the axis to some negative value.

The lines representing the axes of the graph should be about the same in width as the heaviest curve, and wider than the coördinates. The lines should be uniform in all the graphs appearing in one article. Full coördinate

lines may be drawn, or the coördinates may be indicated by short stubs running in from the axes. The appearance is usually best if the entire graph is framed in a rectangle

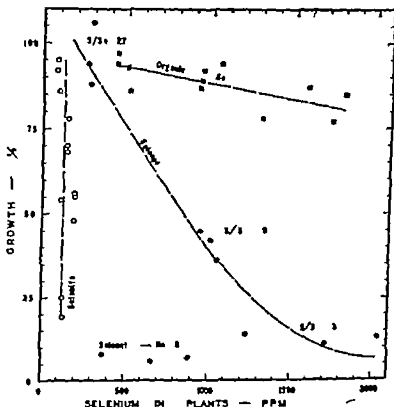


FIG 8. Relationship of growth to selenium content of maize supplied with selenium as selenate selenite and organic selenium (derived from extract of *Astragalus*) (Log scale of abscissas except the zero) (*Trelease S F* and *S S Greenfield*)

but in some cases it may be preferable to leave the graph open at the top and at the right.

Letters and numbers should be made with lines that are somewhat thinner than those used for the axes and

curves. They are best made with the aid of Leroy lettering equipment or Wrico lettering guides and pens, obtainable from dealers in draftsmen's supplies. The size of the letters and numbers should be such that they will be $\frac{1}{16}$ or 65 thousandths of an inch high in the reproduction. Table 7 will be found helpful in the selection of the proper lettering guides and pens to be used to obtain

TABLE 7

Lettering guides or templates to be used for various degrees of reduction, to give letters $\frac{1}{16}$ or 65 thousandths of an inch high in the reproduction

[illegible]	[illegible]	[illegible]		[illegible]	
		Guide	Pen	Template	Pen
	[illegible]				
.15	425	425	3	425	5
.20	325	350	3	350	4
.25	270	290	4	290	4
.30	215	240	4	40	3
.35	185	200	5	200	3
.40	165	175	6	175	2
.45	145	140	7	140	1
.50	130	140	7	140	1

well-formed letters of this size after various degrees of reduction.

Corrections in the inked graphs may be made by careful erasing and redrawing, or by pasting a strip of paper over the original and then redrawing. Small irregularities may be removed with an etching knife or by application of pure white water-color pigment (Chinese white). Retouching may be done in India ink with a Crow quill pen. After the graph is finished, it should be gently cleaned with a soft eraser being careful not to lighten the ink lines.

lines may be drawn, or the coördinates may be indicated by short stubs running in from the axes. The appearance is usually best if the entire graph is framed in a rectangle,

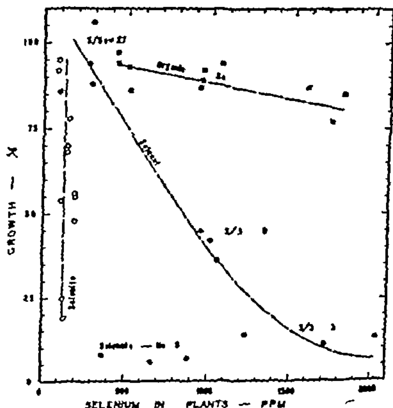


Fig 8 Relationship of growth to selenium content of maize supplied with selenium as selenate selenite and organic selenium (derived from extract of *Astragalus*) (Log scale of abscissas except the zero) (*Trelease S F and S S Greenfield.*)

but in some cases it may be preferable to leave the graph open at the top and at the right.

Letters and numbers should be made with lines that are somewhat thinner than those used for the axes and

no. 1219, 342 pages fifty cents). There are many excellent photographic books and other aids such as the series of Kodaguides. Owing to the complex nature of the problem, only a few suggestions can be given here.

The principal subject of the photograph should be shown as clearly and sharply as possible and non-essential objects should be subordinated or excluded. The background should be unobtrusive It should be free from distracting lines or spots and preferably of a uniform tone—white, gray or black—that contrasts sufficiently with the subject. Light backgrounds are usually more attractive than dark ones. Even a light-toned object may show its form and detail best on a white or gray background. The objects in the picture should be arranged so as to give a simple and effective composition. Tones of light and shade should be balanced. Point of view and perspective are important. A worm's-eye or a bird's-eye view may sometimes be both effective and pleasing.

Modeling and texture should be brought out by differential lighting In photographing scientific specimens left-hand illumination is recommended because we are accustomed to visualize objects as lighted in that way If photographs of a series of specimens are to be mounted together illumination in all should come from the same direction otherwise elevations may be mistaken for depressions, or vice versa. The following conventional arrangement of lights is excellent for many scientific subjects The stronger light (twice the weaker) is placed about 45 degrees to the left of the camera and 45 degrees above it, and the weaker light is placed at the same distance from the object, but level with the camera and considerably less than 45 degrees to the right of it. The same arrangement

Some publishers take care of all numbering and lettering on graphs. In this case, the author is expected to provide each graph with a tracing paper overlay, fastened with cellulose tape, rubber cement, or paste to the upper margin of the back of the copy and folded down over the face. Numbers and letters should be written in pencil or ink on the overlay in the exact places where they are to appear on the graph. The style of letters, whether Roman or italic (vertical or slant) should be indicated by instructions written on the margins of the graph or tracing paper overlay.

Other publishers (for example *The Journal of the American Chemical Society*) expect the author to care for numbering and lettering within the graph, but have the numbers and labels on the coördinate axes set up in type by the printer. The author should place them in pencil outside the axes.

PHOTOGRAPHS[13]

1. *Preparation of photographs.* Making a good photograph for scientific illustration usually requires some knowledge of photographic technique and skill gained through experience. The camera should preferably be focused by a ground-glass screen and unless flash bulbs are used, it must be firmly supported on a tripod. A suitable type of camera for most scientific subjects is one having a double-extension bellows and using sheet films and film packs of medium size, $3\frac{1}{4} \times 4\frac{1}{4}$ inches. Everyone who does photographic work should have a copy of the Eastman Kodak Company's *How to Make Good Pictures* (240 pages, seventy-five cents) and of *Basic Photography* (War Department Technical Manual

[13] Mr. John W. McFarlane of the Eastman Kodak Company has helped in the preparation of this section.

no. 1-219 342 pages fifty cents) There are many excellent photographic books and other aids, such as the series of Kodaguides. Owing to the complex nature of the problem, only a few suggestions can be given here.

The principal subject of the photograph should be shown as clearly and sharply as possible and non-essential objects should be subordinated or excluded. The back ground should be unobtrusive It should be free from distracting lines or spots and preferably of a uniform tone—white, gray or black—that contrasts sufficiently with the subject. Light backgrounds are usually more attractive than dark ones Even a light-toned object may show its form and detail best on a white or gray background. The objects in the picture should be ar ranged so as to give a simple and effective composition. Tones of light and shade should be balanced. Point of view and perspective are important. A worm's-eye or a bird's-eye view may sometimes be both effective and pleasing.

Modeling and texture should be brought out by dif ferential lighting. In photographing scientific specimens, left-hand illumination is recommended because we are accustomed to visualize objects as lighted in that way If photographs of a series of specimens are to be mounted together illumination in all should come from the same direction otherwise elevations may be mistaken for depressions, or vice versa. The following conventional arrangement of lights is excellent for many scientific sub jects: The stronger light (twice the weaker) is placed about 45 degrees to the left of the camera and 45 degrees above it, and the weaker light is placed at the same distance from the object, but level with the camera and considerably less than 45 degrees to the right of it. The same arrangement

Some publishers take care of all numbering and lettering on graphs. In this case, the author is expected to provide each graph with a tracing paper overlay fastened with cellulose tape, rubber cement, or paste to the upper margin of the back of the copy and folded down over the face. Numbers and letters should be written in pencil or ink on the overlay in the exact places where they are to appear on the graph The style of letters, whether Roman or italic (vertical or slant) should be indicated by instructions written on the margins of the graph or tracing-paper overlay

Other publishers (for example *The Journal of the American Chemical Society*) expect the author to care for numbering and lettering within the graph, but have the numbers and labels on the coördinate axes set up in type by the printer The author should place them in pencil outside the axes.

PHOTOGRAPHS[11]

1 *Preparation of photographs* Making a good photograph for scientific illustration usually requires some knowledge of photographic technique and skill gained through experience. The camera should preferably be focused by a ground-glass screen and unless flash bulbs are used, it must be firmly supported on a tripod A suitable type of camera for most scientific subjects is one having a double-extension bellows and using sheet films and film packs of medium size, $3\frac{1}{4} \times 4\frac{1}{4}$ inches. Everyone who does photographic work should have a copy of the Eastman Kodak Company's *How to Make Good Pictures* (240 pages, seventy-five cents) and of *Basic Photography* (War Department Technical Manual

[11] Mr John W McFarlane of the Eastman Kodak Company has helped in the preparation of this section.

Cameras with an extensible bellows and ground-glass focusing may be used for natural-size photography or for enlargements if a positive supplementary lens is added. Magnifications of from 1 to 25 or more diameters, which require a very long bellows draw may be obtained by means of a series of special lenses—the Bausch and Lomb Micro-Tessars, the Goerz Dagors, and the Kodak Projection Lenses—having focal lengths ranging upward from 16 mm. A lens with a focal length of 50 mm. is especially suitable for magnifications up to 5 or 10 diameters. For magnifications greater than unity it is best to use a vertical camera on a sturdy rod support, such as the photomicrographic cameras of the American Optical Company and of the Bausch and Lomb Optical Company or the Kodak Precision Enlarger with a camera-back adapter. When the bellows of the camera is extended, for subjects closer than about 8 times the focal length of the lens, the exposure must of course be multiplied by the correct factor. This may be ascertained with the aid of the Kodak Lens Guide or it may be calculated by means of the following formula

Exposure factor = (Lens-to-film distance)^2 + (Focal length)^2

Other optical formulae, useful in this type of photography are the following:

Magnification
= (Lens-to-film distance—focal length) + (Focal length)

Lens-to-subject distance
= (Focal length + magnification) + (Focal length)

In all close-up photography correct exposure time can best be attained by a series of trial exposures. A good procedure is to make an estimate of the correct exposure,

of lights may be used when the camera is in either the horizontal or vertical position.

Although this simple system of illumination is usually satisfactory it should be modified as much as necessary to suit the particular subject. The important point is to arrange the illumination so that the negative will faithfully record the outline, form tone values and details (in both shadows and high lights) of the original subject. Control of *tones in photographing colored subjects* requires the use of fully panchromatic film and a suitable filter Natural tone contrasts are obtained with a filter that gives full color correction, with the particular emulsion and light source used. When desirable, exaggerated contrasts may be secured with a properly chosen filter A filter lightens the rendering of objects of its own color as compared with objects of other colors. The effect of strong filters—that is, orange, red blue, and green—can be seen through the filter beforehand. The Kodak Contrast Viewing Guide simplifies selecting the appropriate filter

Extreme close-ups of small objects are *often* needed in illustrating scientific articles. These may be made with a simple camera if a positive supplementary lens is added to the camera lens and a focal frame is attached to the camera base (see article on *Portra Lenses and a Technique for Extreme Close Ups* available on request to the Eastman Kodak Company) The 'focal frame which is easily constructed surrounds the field photographed and assures correct focus. This technique is especially useful for both outdoor and indoor work with a 35 mm camera and is adaptable to a wide range of subjects—flowers insects, small animals apparatus, and medical subjects such as skin teeth, eyes and pathological specimens. Since the camera is used with the normal lens-to-film distance ordinary exposure guides apply

course would make an unmounted print curl and would smudge one that had been retouched.

The print for reproduction should preserve as closely as possible the details that exist in the original subject. It is desirable to have the print show a wide range of tone values, with detail in both shadows and high-lights. A good procedure is to make a series of prints on several contrast grades of paper and then to select the print that seems best. The usual method of selecting the proper contrast grade of paper for a normal print is to make a test print that gives the desired high-light gradations. Then (a) if the shadows are also correct, the paper is of the right contrast grade; (b) if the shadows are blocked by over exposure, use a less contrasty paper; (c) if the shadows are not dark enough, use a more contrasty paper.

Special requirements of the half-tone process indicate the desirability of a slight modification of the usual procedure in print making. A print for reproduction should not make use of the full range of tone values from clear white to jet black. The reason for this recommendation is that the rendering of detail at both ends of the tone scale is unavoidably degraded; the density-exposure gradient is less at the extremes of the characteristic curve of papers than in the middle-tone region of the curve. A print of slightly softened quality is therefore recommended.

The best method of making such prints is to use the same contrast grade of paper that would serve for a normal print, but to adopt the following procedure. Adjust the printing exposure so that the lightest important high-light detail is a very light gray, not a clear white. After obtaining this exposure by trial, make the final print in such a manner that the extreme shadow regions are held back by dodging to such an extent that the darkest important shadow detail is not quite a full black. When dodging is

preferably with the aid of a meter and then to try four exposures—[illegible], [illegible], [illegible] and [illegible] times the exposure estimated to be correct. The negatives should then be developed and if necessary a new range of exposures may be tested

2 *Copy for reproduction.* Photographs are reproduced as half tones, in which the picture is broken up into minute dots. The photograph for copy should be as clear and sharp as possible It may be considerably larger than the reproduction or the same size, but should never be smaller If a print needs to be retouched, it should be of large size—5 × 7 or 8 × 10 inches.

Glossy white ferrotyped paper is best for prints intended for reproduction. A paper with a pebbled or rough surface or a cream color should never be used If much retouching is necessary some workers prefer a print with a smooth or semi matte surface. But a glossy print may be prepared so that it will accept retouching The purpose of such preparation is chiefly to remove any invisible greasy finger marks that have come from handling The simplest method is to sift Fuller's earth or talc on the print and then to rub this lightly over the whole surface of the print with a dry cotton tuft or soft cloth Rubbing must be very light, or the print may show scratches. This method is suitable for prints that already bear retouching and for those that are either mounted or unmounted Those who do much work of this kind prefer to prepare glossy prints by rubbing over the whole surface with a moist cotton swab that has been previously rubbed on a cake of gelatin. The cake is prepared by dissolving ordinary gelatin (obtainable at a drugstore) in boiling water adding one drop of glacial acetic acid to about 30 grams of gelatin, and allowing the solution to evaporate in a small container so that it forms a cake. This treatment can be used only on a mounted print that has had no previous retouc

exact size desired. Cropping lines should be drawn in pencil on the margin of the cardboard mount extending to the print but not across its face the photoengraver will include only the indicated part of the print, and will square it. The mounted photograph should be covered with a protective flap of brown paper attached with paste to the upper edge of the rear surface of the cardboard and folded down over the face of the print.

3. *Arrangement in groups.* If a number of separate photographs are to be arranged together for half tone reproduction in a single plate, they should be carefully matched for uniformity of density and contrast If the group consists of some light and some dark prints or includes prints that differ in contrast, these differences may be accentuated in the reproduction. The selected prints should be trimmed and mounted with special care (Some publishers prefer to do the mounting in groups in this case the prints should be supplied untrimmed and unmounted.) Rubber cement is most convenient for such mounting because it allows the position of each print to be accurately adjusted. The cut edges of the prints always show in the half-tone reproduction and unless the edges are straight, the background will have to be routed out, thus doubling or trebling the cost of reproduction. This extra cost is usually chargeable to the author If possible the photographs should be fitted together perfectly so as to cover completely the cardboard on which they are mounted. The photoengraver will cut a white line where they join.

Figure numbers and explanatory letters may be put directly on the photographs in black ink or white ink, using a Wrico or a Leroy lettering guide. (See table 7.) Printed characters may be attached with rubber cement

impracticable the next best procedure is to use a contrast grade of paper that is one lower than would normally be used in making the best print for viewing The exposure should be adjusted so that the high-lights are slightly gray and the shadows are not quite a full black. The use of a slightly softened print for reproduction does not result in reproduction that is too soft. In the hands of a good photoengraver the tone scale is expanded so that a much better reproduction will be obtained than could result from a normal print.

Blemishes in a print will be conspicuous in the reproduction. Imperfections of this sort include blurred images muddy high lights, fog, spots, scratches, dents, cracks, and stains A defective print should be replaced by one that is perfect. If this is impossible skillful retouching by an artist may remove minor defects but this work is expensive and the results are likely to be unsatisfactory

If it is necessary to write on the back of a photograph, lay the print on a smooth hard surface (such as a sheet of glass) and write very lightly with a soft pencil unless care is taken, the writing will show in relief on the face of the print. A better method is to write on a separate strip of paper and attach this with dry mounting tissue to the margin on the back of the print.

The print should be mounted on a piece of smooth flat cardboard large enough to leave a margin of about an inch around the print. Dry mounting tissue is best for this purpose. Rubber cement is convenient for temporary mounting but after some time it is likely to discolor the photograph and such discoloration will show in the half tone. Paste, glue, or mucilage should not be used because they are likely to wrinkle or stain the print. It is usually best not to trim the print, before mounting, to the

exact size desired. Cropping lines should be drawn in pencil on the margin of the cardboard mount extending to the print but not across its face the photoengraver will include only the indicated part of the print, and will square it. The mounted photograph should be covered with a protective flap of brown paper attached with paste to the upper edge of the rear surface of the cardboard and folded down over the face of the print.

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Figure numbers and explanatory letters may be put directly on the photographs in black ink or white ink, using a Wrico or a Leroy lettering guide. (See table 7.) Printed characters may be attached with rubber cement

care should be taken to have all the slips of paper the same size, trimmed square, and set straight in mounting.

4. *Models* It will be useful to study as models the photographs that are published in the scientific journals. Critical examination will show good and poor pictures that serve to emphasize the points briefly discussed here. Perhaps the best examples of highly effective photography are those that appear in current advertising material and inexpensive booklets issued by manufacturers of apparatus instruments, and photographic materials.

LANTERN SLIDES

In preparing lantern slides to illustrate scientific and technical lectures, it is important to remember that a slide should contain much less material than may be adequately shown in a printed illustration or table. The slide should be so simple and clear that persons with normal eyesight sitting in the back of the room can see it easily and grasp its meaning completely It is just as important to have slides that are visible to everyone as it is to speak so that the whole audience can hear Slides should show essential features very clearly and should be as free as possible of non-essentials that distract the eye

It would be a mistake to attempt to show in a single slide a full page comprehensive table of data. Even if it were possible to have the words and figures visible to persons in the back of the room the table would be too complicated to be readily understood It is much better to divide such a table into a series of smaller tables. A useful rule is never to include in a single slide a larger table than can be typewritten double-spaced on a card with dimensions of 5 by 8 inches.

Graphs to be used as slides should be very simple, with

broad lines and clear numbers and letters. Numerous, crowded curves in a slide cannot be deciphered by the audience.

When illustrating complex three-dimensional objects by lantern slides, it is best to give first a comprehensive view for orientation, and then to show a series of close-ups in which the individual features are presented on as large a scale as possible.

PREPARATION OF ILLUSTRATION COPY

1. *Number and reduction.* For purposes of identification, the figure number the author's name and address, and the title of the article should be written on the margin or back of each piece of illustration copy or on a piece of paper attached securely with paste to the lower margin of the copy The "top" of the illustration should be indicated if there is any possibility of misunderstanding

Clear directions for reduction should also be written on the margin or back. (See section on "Correct Proportions, page 103.) In giving directions, it is best to specify the final width or height. (For example "Reduce width to 4½ inches" or "reduce height to 6 inches.") In designating fractional reduction, it is better to say 'reduce width to ¾" than "reduce ¼" or "¼ off."

If the illustrations are larger than 8½ by 11 inches, duplicate photographic prints or Photostats of smaller size should accompany the manuscript, to facilitate sending the article to referees, or reviewers.

Retain a good photographic copy of each illustration, for use if the original is lost in the mail.

The original is best for making a photoengraving. A very clear photographic copy may be used. But a copy that is out of square (not rectangular) or faint is not acceptable.

2. *Legends.* The legends, or titles, of plates and figures should be self-explanatory They should be typewritten *double-spaced* in numerical order upon one or more sheets of paper placed at the end of the manuscript following the literature cited. Always supply a short title for the illustration. Any descriptive matter should follow directly after this title in the form of paragraphs.

The legend of each text figure is printed below the figure. A short title appears below each plate and complete descriptions of all plates are usually given in a separate section of the paper following the literature cited and preceding the plates.

3 *Place of insertion* The place of insertion of each text figure must be marked in the manuscript and in the galley proof (For example, write in the margin "Insert figure 2 ")

4 *Numbering text figures and plates* Text figures should be numbered from 1 up in each article Plates should be numbered 1 2 3 etc., in each article and figures in plates should be numbered from 1 up beginning a new series either in each plate or in each article. Some journals number all figures (in text and plates) consecutively from 1 up in each article this simplifies text reference to the figures.[11]

5 *Reference in text.* In the text, the figures and plates should be referred to by number the words *figure* and *plate* should not be capitalized. (For example Examination of figure 5 of plate 3 shows that) If the reference is made parenthetically the words *figure* and *plate* should be abbreviated, using the forms "fig." and "pl." for both singular and plural. [For example The

[11] Some journals use Arabic numbers for figures and Roman for plates. The numbering of plates in some journals is consecutive throughout each volume.

data of table 7 are shown as graphs in figure 4 in which the method of plotting is the same as for series A (fig. 1).)

Be sure to check all text references to illustrations after the manuscript has been completed.

SHIPPING ILLUSTRATIONS

Photographic prints or drawings intended for half tone reproduction are likely to be damaged when sent by mail or express unless they are well protected, especially at the corners. The following method of wrapping gives good protection. Place the prints between sheets of thin cardboard, cut to a size slightly larger than the prints. (If the prints are mounted, cover them with a sheet of thin cardboard of the same size as that on which they are mounted.) Bind the cardboard sheets together on all four sides with short strips of cellulose tape. Anchor this packet securely with more strips of cellulose tape to a piece of stout corrugated board about two inches larger all around than the original packet. This will keep the packet from slipping to an edge or corner. Place another piece of corrugated board of the same size on top (preferably one with the corrugations running at right angles to those of the other) and bind the two firmly together with strips of cellulose tape. Finally wrap in heavy paper and seal all loose edges with gummed tape or tie securely with string. Send by first-class mail, registered, or by express, whichever costs less.

PREPUBLICATION REVIEW AND REVISION

1. *Purposes.* Many scientific journals have adopted the plan of having every paper that is submitted for publication read and criticized by two competent reviewers selected by the editor or the editorial committee. The purposes of this procedure are (1) to improve the quality of the papers that are printed in the journal and (2) to

avoid the acceptance of material more rapidly than it can be published with the funds available—by promoting condensation of text and tabular material and elimination of unessential illustrations, as well as by declining the papers that make the least distinct contributions to the particular field of science. Since all papers are sent to reviewers, this procedure implies no reflection on the merits of the papers. Prepublication review represents an editorial service that the authors appreciate in the majority of cases

2 *Work of reviewers* Each reviewer is asked to give his general opinion regarding the suitability of the paper for publication in the journal, and to make specific suggestions regarding possible errors lack of clearness parts that may be condensed, omitted, or improved in form and arrangement, etc. The reviewer may be asked the following questions

(*a*) Would you grade the paper A B C D or E on the basis of its relative merit as a scientific contribution—if C represents the average rank of papers in recent volumes of the journal? (*b*) Has the material been published previously? (*c*) Has the work been carried far enough to warrant publication? (*d*) Is there some other journal for which the paper would be more suitable? (*e*) Are the conclusions logical and are they based on accurate and sufficient data? (*f*) Is the arrangement logical? If not suggest improvements (*g*) Which, if any of the main ideas are not developed with sufficient emphasis? (*h*) What parts may be condensed or omitted? (*i*) Have you found any errors in the paper? (*j*) Is there lack of clearness? If so where? (*k*) Where does the literary form need to be improved? (*l*) What improvements if any do you regard as necessary in the illustrations? (*m*) Which if any of the illustrations could be omitted?

3 *Author's revision* If the reviews indicate that the article would be acceptable but needs revision it is returned to the author with the comments of the reviewers (quoted anonymously so that the matter of personalities

will not enter) and a note that asks the author to study the paper again with regard to revision in accordance with the reviewers' suggestions. The author is told that of course he may not consider it desirable to adopt all the recommendations of the reviewers, and that the reasons for his preference in such cases should be explained. When the paper has been revised by the author it is returned to the editor.

4. *Judgment of a third reviewer.* Advice of a third reviewer may be asked by the editors if the two reviewers disagree as to whether the paper would be acceptable after revision, or if the author is unwilling to revise the paper in accordance with the reviewers' recommendations. The opinions of reviewers are advisory, and final responsibility for the selection of papers rests with the editors.

5. *Publication after acceptance.* After its acceptance the paper is published in its proper turn, according to the original date of receipt, unless revisions necessitate unavoidable delay.

6. *Rejection of manuscripts.* The editor may decide after seeing the reviewers' comments and reading the paper himself that the paper could not be accepted even if it were revised. In this case he returns it to the author with a brief note of regret, containing suggestions, if possible, regarding suitable journals to which the article might be submitted. The editor obviously must not accept material more rapidly than it can be published with the funds available. With the aid of the reviewers and the editorial committee, he selects the papers that seem to be best, and he is compelled to reject the others.

PROOFREADING

1. *Galley proofs.* Galley proofs, on sheets about 18 cm. wide and 60 cm. long, are submitted to the author

Cancellation

Delete, or take out, character or ~~the~~ word marked

Insertion

Insert word letter, or punctuation mark written in the margin.

Spacing

Insert space betweenwords letters or lines.

Close u p or take out the space.

Close up but leave some space

Position

Turn a reversed letter

[Carry farther to the left.

Carry farther to the right.

Move down a letter character or word.

Move up a letter character or word

Indent one em.

Straighten a crooked line

| Straighten lateral margin of printing

Transpose of order words to letters

Correct uneven spacing

Paragraphing

Make a new paragraph

No paragraph

Miscellaneous

Push down a space or quadrat that prints.

Question to author Is this right?

Allow to ~~stand~~ as it is

Kinds of type

l.c.	Put in lower case.
caps	Put in capitals.
lc	Use a capital.
s.c.	Put in small capitals.
	Put in small capitals.
rom.	Put in Roman.
ital.	Put in italic.
b.f.	Put in bold-face.
	Put in bold face.
w.f.	Wrong font (wrong size or style).
	Superscript 1.
	Superscript 2.
	Subscript 2.
X	Type is broken or imperfect.

Punctuation

⊙	Period.
	Comma.
	Semicolon.
	Colon.
	Apostrophe.
	Quotation marks.
	Hyphen ( )
	One-en dash (-)
	One-em dash (—)
	Two-em dash (——).
(/)	Parentheses.
[/]	Brackets.

together with the manuscript. The author is expected to correct the proofs, he should see that the proofs agree with the manuscript and should correct all genuine errors. The proofs should be returned to the editor as soon as possible.

2. *Marks.* All corrections must be made by means of proofreader's marks in the margins of the proof sheets. Corrections should be made clearly and neatly using a *red pencil for printer's errors* and a *black pencil for changes from copy* They should be made horizontally on the page, and opposite the printed lines in which the errors occur

METHOD

1 *Two persons.* If possible have another person slowly read aloud from the manuscript, while you follow the galley proofs and make the necessary corrections and changes. The one who reads aloud should call your attention to every paragraph mark of punctuation, capitalized word, italicized figure or word bold-face figure or word, etc If you cannot secure the services of another person in this work, then it will be necessary for you to compare carefully the galley proofs with the manuscript, line by line or sentence by sentence.

2 *Two readings.* Always read the proofs *twice*, at least.

MISCELLANEOUS SUGGESTIONS

1 *Special attention.* Give particular attention to tables, figures, names, quotations, and citations. Check text references to illustrations. Assume that errors are present find and correct them.

2. *Questions.* Be sure to answer questions, or queries made by the printer

3 *Instructions to printer* If you do not know how to

indicate a correction, simply draw a horizontal line through the word that needs to be changed and then write clear instructions in the margin, enclosing the instructions in a circle.

4. *Omissions.* Watch for words or lines that may have been omitted.

5. *Reading for meaning.* After you have read the proofs twice as suggested above, it is well to read them a third time, paying particular attention to the sense or meaning, of the statements. You will not be permitted to make revisions but genuine errors must be corrected, of course whenever they are discovered.

6. *Tables.* Check to make sure that the tables have been properly distributed, or that their positions have been correctly marked in the margin of the proof.

7. *Illustrations.* The approximate place for inserting every illustration should be clearly marked in the margin of the proof. (For example, write in the margin Insert figure 1.) Check the magnifications of drawings and photographs in the photoengraver's proofs and correct the legends if necessary.

8. *Headings.* Look through the proofs for the purpose of correcting errors in all headings.

9. *Expense of alterations.* Alterations, or changes from the original copy sent to the printer are very expensive, and some journals charge them to the author.

PAGE PROOFS

After the corrected galley proofs have been received by the editor and have been read and marked by him, they are returned to the printer. The corrections marked on the galley proofs are made and then the type is divided into pages of the required length. Page proofs are sent to the editor who compares them with the galley proofs to

see that all the corrections have been made. The editor then reads the page proofs critically, searching for in consistencies or errors The page proofs are returned to the printer, who makes the necessary changes and begins the actual press work.

BIBLIOGRAPHY

ALLBUTT T C 1923 Notes on the composition of scientific papers. 192 p London Macmillan and Co

ALMACK, J C 1930 Research and thesis writing. 310 p Boston Houghton Mifflin Co

ANDERSON J A. 1945 The preparation of illustrations and tables. Amer Assoc. Cereal Chemists Trans. 3 74 104

BRENNECKE, E JR. AND D L. CLARK. 1942. Magazine article writing. 486 p New York The Macmillan Co.

CAIRNS W B 1900 The forms of discourse 353 p Boston: Ginn and Co

CHICAGO UNIVERSITY PRESS. 1937 A manual of style 10th ed 391 p Chicago University of Chicago Press

CLARK, W M 1934. Evolution toward a mature scientific literature. Jour Bacteriol 27 1-18.

CROXTON F E AND D J COWDEN 1939 Applied general statistics 944 p New York Prentice-Hall.

DARTMOUTH COLLEGE AMOS TUCK SCHOOL OF ADMINISTRATION AND FINANCE 1931 Manual on research and reports with special application to the investigations in the field of business economics and public affairs. 106 p. Baltimore Williams & Wilkins Co

EARLE, S C 1911 The theory and practice of technical writing. 301 p New York The Macmillan Co

FISHER, R. A 1941 Statistical methods for research workers. 8th ed. 344 p Edinburgh Oliver and Boyd

FISHER, R A. 1942 The design of experiments. 3rd ed. 236 p Edinburgh Oliver and Boyd.

FULCHER, G S 1940 Authors abstracts. Science 91 191

FULTON M. G 1939 *Expository writing 3rd ed., 542 p New* York; The Macmillan Co

GILL, R. S 1940 The author-publisher-printer complex. 76 p Baltimore Williams & Wilkins Co.

GREEVER, G., AND E. S. JONES. 1942. The Century handbook of writing. 4th ed., 384 p. New York: The Century Co.

JONES, A. L. 1909. Logic, inductive and deductive. 304 p. New York Henry Holt and Co.

LAWRENCE, A. S. C. 1941 The scientific photographer 180 p. New York: The Macmillan Co.

LIVINGSTON B. E. 1912. The choosing of a problem for research in plant physiology Plant World 15 73–82.

LONG, L. R. 1932. Magazine publishing. 323 p. Baltimore: Williams & Wilkins Co.

McDOWALL P. B. 1929 English and science. 192 p New York: Van Nostrand Co.

MANLY J. M., E. RICKERT AND M. FREEMAN. 1929. The writer's index of good form and good English. 527 p. New York Henry Holt and Co.

MILLER, C. W 1942. Principles of photographic reproduction. 353 p New York The Macmillan Co.

MUELLER, J F 1935. A manual of drawing for science students. 122 p. New York Farrar and Rinehart

NELSON J R. 1940 Writing the technical report. 373 p. New York McGraw Hill Book Co

OXFORD DICTIONARY OF CURRENT ENGLISH, CONCISE. 1934. Rev by H. W Fowler and H G Le Mesurier 3rd ed., 1507 p. Oxford Clarendon Press.

PATERSON D D 1939 Statistical technique in agricultural research 263 p. New York McGraw Hill Book Co.

RANKIN T E. 1917 The method and practice of exposition. 273 p. New York The Macmillan Co

RIDGWAY J L. 1938 Scientific illustration. 173 p Stanford University Calif Stanford University Press.

RIKER, A J 1946 The preparation of manuscripts for Phytopathology Phytopathology 36 953–977

RIKER, A J AND R S RIKER. 1936. Introduction to research on plant diseases. 117 p Madison, Wis. Authors.

ROGET P M. 1931 Thesaurus of the English language in dictionary form. Rev by C O. S. Mawson. 600 p. Garden City New York. Garden City Publishing Co.

[illegible], M. C 1935. Maximum convenience in citations. Science 80 11–13

SHILLABER, C. P 1944. Photomicrography in theory and practice. 773 p. New York: John Wiley and Sons.

see that all the corrections have been made. The editor then reads the page proofs critically, searching for in consistencies or errors The page proofs are returned to the printer, who makes the necessary changes and begins the actual press work.

BIBLIOGRAPHY

ALLBUTT T C 1923 Notes on the composition of scientific papers. 192 p London Macmillan and Co

ALMACK, J C 1930 Research and thesis writing. 310 p Boston Houghton Mifflin Co

ANDERSON J A. 1945 The preparation of illustrations and tables Amer Assoc Cereal Chemists, Trans. 3: 74-104.

BRENNECKE, E. JR. AND D L. CLARK. 1942. Magazine article writing. 486 p New York: The Macmillan Co

CAIRNS W B 1909 The forms of discourse 358 p Boston: Ginn and Co

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CLARK W M. 1934 Evolution toward a mature scientific lit erature Jour Bacteriol. 27 1-18.

CROXTON F E. AND D J COWDEN 1939 Applied general statistics 944 p New York Prentice-Hall

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EARLE S C 1911 The theory and practice of technical writing. 301 p New York The Macmillan Co

FISHER, R. A. 1941 Statistical methods for research workers. 8th ed., 344 p Edinburgh Oliver and Boyd.

FISHER, R A. 1942. The design of experiments. 3rd ed. 236 p Edinburgh Oliver and Boyd.

FULCHER, G S 1940 Authors abstracts Science 91 191

FULTON M. G 1939 Expository writing 3rd ed 642 p New York The Macmillan Co

GILL, R. S 1940 The author publisher-printer complex. 76 p Baltimore Williams & Wilkins Co

INDEX

A (article) in titles, capitalized and italicized, 41.
Abbreviations of names of periodical publications, 81
  of units of weight and measure 80
Abstract, preparation of 14
Abstract journals 74
Abstracts and quotations, 87
Accuracy of calculations, —
  of citations, 83.
  of quotations, 98.
  of statements, 4 23
  of tables 66.
  of typewritten manuscript 29
Acknowledgments, 80
Address, author's, on copy for illustrations, 133
  on text copy 27
Adequacy of sample size 42
Affiliated libraries 72.
Agriculture literature sources 73
Algebraic symbols and equations, 40
Alignment in proof 136
  in tables 63
Alterations, in manuscript, 29
  in proof 141
Ambiguity of terms 10 17
Analysis of data,
Analytical table of contents, 100.
Anatomical parts, names of 40.
Animals, names of 47
Annual reviews 75
Answers to reader's questions 10
Anthropology sources of literature, 73.
Arrangement of manuscript, 33
  of topics, 3, 9 22.
Article (a, an, the) as part of the title 41
Articles printed, estimating length of 41
Articles titles of capitalizing, 39
  in quotation marks, 41.
Author's address and name on copy for illustrations, 133
  on text copy 27
Author's corrections, 141.

Begging the question, 15.
Bibliography 88, 142.
Biological terms, 35 41 88.
Black-face or bold-face type 38.
Body of type definition of 36.
Books, citation of 88, 90.
  titles of in text, 39 41.
Botanical sciences literature sources, 73.
Botanical terms, capitalizing, 39
  italicizing 41
  rules for 46
Box heads of tables, 63.
Bulletins experiment station citation of 88 91

SMITH E F 1920 An introduction to bacterial diseases of plants 688 p Part V p 633–661 Philadelphia W B Saunders Co

SNEDECOR, G W 1940 Statistical methods applied to experiments in agriculture and biology 3rd ed 422 p Ames Iowa Iowa State College Press.

SOULE, R. 1938. A dictionary of English synonyms Rev and enl by A D Sheffield 614 p Boston: Little Brown and Co

UNITED STATES GOVERNMENT PRINTING OFFICE. Style manual 1945 435 p Washington Government Printing Office

UNITED STATES WAR DEPARTMENT 1941 Basic photography War Department Technical Manual no 1-219 342 p Washington Government Printing Office

WISTAR INSTITUTE. 1934 The Wistar Institute style brief 169 p Philadelphia Wistar Institute Press.

WOOLLEY E. C. 1909 The mechanics of writing 396 p Boston: D C Heath and Co.

WOOLLEY E. C F W SCOTT AND E. T BERDAHL. 1944 College handbook of composition. 452 p Boston D C. Heath and Co

WORTHING A G AND J GEFFNER. 1943 Treatment of experimental data 342 p New York John Wiley and Sons.

Discussion of results, 6 12.
Diseases, 40.
Divisions of paper indication of, 4, 101.
Dollars, 44.
Drawings, letters in, 40
from photographs 110.
preparation of, 106.

Economic sciences, literature sources, 81.
Em, definition of, 33.
Em dash, definition of 35.
Emphasis of general conclusions, 13.
En, definition of, 35.
En dash, definition of 35.
in citations, 37
Engineering, abbreviations for 54.
literature sources, 80
report outline of 7
use of non-metric system in, 43.
Equations, mathematical, 40, 43.
Erasure in manuscript, 30
Errors in manuscripts, 25, 29
Errors in writing, check list of 23
Estimating length of printed article 31
Etchings zinc 106 107 108, 110 112.
Euphony 74
Examples, use of in illustrating abstract ideas, 8.
Exceptions and abnormalities in data, 3.
Experiment station bulletins, 80, 81

Explanatory letters in illustrations 40 109 122, 131.
Exponents 40 44.
Exposures, trial, for photographs, 127

Fahrenheit degrees 43.
Family names of animals and plants 39 41 56.
Figure not capitalized, 40.
Figures (illustrations) 103.
Filters photographic 126.
Folders for tables, 61.
Footnotes, to tables 64
to text, 36.
Foreign words, not italicized, 42.
Fractions 44

Galley proofs 137
Genera, 39 41 56 57
General science, literature sources 81.
Generalization, too broad, 15.
Geography literature sources, 80.
Geology literature sources, 81.
Geometric symbols 40.
Gram 54.
Grem 54
Graphs for analyzing data, 2.
letters in, 40
preparation of, 111.
Grouping illustrations, 108, 109 131

Half compounds of 44.
Headings for divisions of text, 101.
running, 29 34.
for tables, 62.

Calculations 2, 45 46
Cameras for scientific subjects 124 126 127
Cancellation in manuscript 30 31
in proof 133
Capitals indication of 31 36
reduction of 36
use of 38.
Carbon copies, 26 27
Carbon pencil drawings 108.
Cardinal numbers hyphen in, 44
Cards for notes, 4
Caret 32
Catalogue, library 67
Cause and effect false relation 17
Center headings and subheadings, 101
Centigrade degrees 43.
Chapters, titles of capitalizing 39
in quotation marks, 41
Characters, number per page 34
Check list of errors in writing, 25
Checking manuscript 29
Chemicals, names of not italicized 42.
Chemistry literature sources 79
Citations to literature 84
Clearness of manuscript, 29
of sentences and paragraphs 23
of tables 53.
Comma, in numbers, 44
use of 21.
Common names of animals and plants 39 41 57
Composition on typesetting machine 28 36 62, 66.
Compound interest law 116
Conciseness, 23.
Conclusions 3 13 15
Connectives, 24
Consistency of discussions 22.
of style 24
Contents analytical 100
Controversial language 12.
Coördinates for graphs, 114
Copper etchings, 107
Copy for illustrations 133.
typewritten preparation of 26
Copy-fitting, 34
Copyrighted material 98.
Corrections in manuscript, 29
in proofs 137
Criteria for choosing research problem, 1
Curves 2, 111
Cutter number 69

Dash, 33.
Dates, 44
Decimal fractions 44
Definition of technical terms 10
Degrees of temperature 43.
Development of topics, 9
Dewey decimal system, 69
Diagrams letters in, 40
preparation of 111
Diction, 10 25.
Dictionaries, viii, 10
Difference between means significance of 47 45.

Mean, standard error of, 42, 44
Measurements, how written, [illegible]
Median, mean, 40, 42
Medicine, literature sources, [illegible]
Metric system, 42
Microfilm, [illegible]
Missing the point, 13
Minor, mean of, 44
Multigraph machine, [illegible]
Mounting photographic prints, [illegible]
Multiplication sign, [illegible]
Names, of anatomical parts, 41, 42
of animals, [illegible]
of chemicals, 41, 42
of diseases, 41, 42
of plants, [illegible]
Nouns, proper capitalization of, 28
Numbers of typewritten copies, [illegible]
Numbers, of citations, 86, 89
of footnotes, 60
of illustrations, 134
of pages, 26, 27
of tables, 62
representation of, 4[illegible]
Omission, in quotation, 66
in table, 61
Optical formulas, 127
Order of material in manuscript, 32
of topics, 9
Ordinal numbers, hyphen in, 44
Organization, [illegible]
Outline construction, 13
of engineering report, [illegible]
of scientific article, 4, 5, 6
preliminary, 5
Overlay tracing-paper, 134
Page form, [illegible]
Page numbers in manuscript, 26, 27
Page proofs, 141
Paper for illustrations, 126, 131, 133
for manuscripts, [illegible]
for photographs, 133
Paragraph side heading, 171
Paragraphs how indicated, 31, 138
Parentheses in names of animals and plants, 55
in reference to citations, 86
in reference to illustrations, 134
Past tense, 20
Per cent and percentage, 43
Periodicals titles of abbreviations for, 91
in citations, 86, 90
Permission to reproduce copyrighted material, 94
Photo-printing process, 100
Photographic services library, 73
Photographs, preparation of, 121
Photostats, 74, 111, 132
Physics literature sources, 83
Pica, in printing, definition of, 32
in typewriting, 26, 33
Plan of composition, 4

Historical sciences literature sources 81
Hours of day 43
Hyphen in fractions 44
in numbers 44
Hypothesis requisites of 16

Ideas logical presentation 15
Illumination in photography 125
Illusions 16
Illustrations preparation of 103.
Inaccuracy in writing 25.
Indentation 38
Indexing and abstracting tools, 74 75
Influential conditions 13
Ink for drawings and graphs *106 113*
Insertions in manuscript 32
in proofs 133.
Interest, in scientific articles 18
Inter-library loans 73
Interpretation of data 2 12.
Introduction 11 19
Italics indication of 31 35
use of 40

Journals abbreviations *of* names of 91
abstract, 74
citation of articles in 88 90
review 74

Lantern slides 132.
Latin names, of anatomical parts *40 42.*
of animals 30 41 57
of diseases 40 42.
of plants 30 41 58
Laws scientific 116
Leaded definition of 37
Legends of illustrations 124
of tables 92.
Length of paper 22 23 24 31.
of paragraphs 25
of sentences 23 25
Lenses, photographic 127
Lettering equipment Leroy and Wrico 123.
Letters in illustrations 40 100 122, 131
subscript and superscript 40
Libraries, affiliated, 73
Library photographic service 73
use for research 67
Line drawings 106 107 108 110 113
Linear law 116.
Linotype machine 36
Literature citations, 84
Literature sources library 78
Loans inter-library 73
Logarithmic plotting *113, 116.*
Logical presentation of ideas 15
Lower-case type 36

Manufactured products capitalization of 30
Map collections 74
Margins in manuscript 27
Marks proofreader's 133.
Mathematical *expressions, 40 45*
Mathematical relationship between variables 116.
Mathematics sources of *literature 82*

Mean standard error of 45, 46
Measurements, how written, 42.
Medical terms, 40 42.
Medicine literature sources, 82.
Metric system 43.
Microfilms, 74
Missing the point, 18.
Money sums of 44
Monotype machine 36
Mounting photographic prints 120
Multiplication sign, 30

Names, of anatomical parts, 40 42.
of animals, 57
of chemicals, 40, 42.
of diseases, 40, 42.
of plants, 56.
Nouns, proper capitalization of 38.
Number of typewritten copies 27
Numbers, of citations, 85, 89
of footnotes 68.
of illustrations, 134
of pages, 26 27
of tables 62.
representation of 42.

Omission, in quotation, 93.
in table 64
Optical formulae 127
Order of material in manuscript 33.
of topics 9
Ordinal numbers hyphen in 41

Organization, 23
Outline analytical 100
of engineering report 7
of scientific article 4 5, 6
preliminary 8.
Overlay tracing-paper 124

Page type 37
Page numbers in manuscript, 26 27
Page proofs, 141
Paper for illustrations 106 111, 113.
for manuscripts, 27
for photographs, 123.
Paragraph side heading, 101
Paragraphs how indicated 31 138.
Parentheses, in names of animals and plants 60.
in reference to citations 86
in reference to illustrations 134
Past tense 20
Per cent and *percentage* 45.
Periodicals titles of abbreviations for 91
in citations, 88, 90.
Permission to reproduce copyrighted material, 98.
Photo-gelatine process, 100.
Photographic services, library 73.
Photographs, preparation of 124
Photostats, 74 111, 122.
Physics literature sources 83
Pica, in printing, definition of 38.
in typewriting, 26 33.
Plan of composition, 4.

Plants names of 56
Plate not capitalized 40
Plates 106
Plotting points in graphs 116.
Point, definition of 37
Political sciences literature sources 81
Power law 116
Prejudice 17
Preliminary outlines, 4 8.
Prepublication review and revision 135
Present tense 20
Presentation, inadequate 25
Prints for half-tone reproduction 123
Probable error 45
Problem, research criteria for choosing, 1
Proceedings *See* Periodicals.
Proofreading, 137
Proofs, galley 137
page 141
photoengraver s 141
Proper nouns capitalization of 38.
Proportions for illustrations 103
Psychology literature sources 83
Publications *See* Books Bulletins, Journals Periodicals Yearbooks
Punctuation revision of 24
rules for 21

Quad definition of 38.
Qualification of conclusions 13.
Quantity units of in tables 13.
in text, 42.
Quarter compounds of 44

Query printer's 140
Questions, reader's answers to 10
Quotations, 97

Reader's questions answers to 10
Recent advances series 76.
Reduction of capital letter 31 120
of illustrations in reproduction 133.
of letters and numbers in illustrations 123.
Referees, 135
Reference sources 71 78.
References to citations 86, 80
to footnotes of tables 64
to footnotes of text 66
to illustrations 12 134
to tables 12 65
Rejection of manuscripts, 137
Reliability and significance of measurements, 46
Repetition, revision to eliminate 24
Report engineering 7
Research problem, criteria for choosing 1
Restoration of words 30 133.
Results, discussion of 12.
Review journals 76
Reviewers 135
Revisions final 23
of conclusions, 3
of headings 101
of manuscript 22.
prepublication 135.
Roman numerals 46
Roman type 36

Run in, definition of 31.
Running headlines, title for 29 34.

Sample size, adequacy of 49
Science in general literature sources 34
Scientific data, first steps in treating, 2.
Scientific names, 39 41, 58
Scientific writing, nature of 4.
Semicolon, use of 21.
Sentences, revision of 22.
Sequence of topics, 9
Serials. *See* Periodicals.
Series number in publication, 84
Shading in drawings, 107 108.
Shipping illustrations, 123.
Side headings 101
Significance of difference between means, 47 48.
of measurements, 48.
Significant figures, 45.
Size of drawing, 103, 106.
of sample 49
of tables, 69
of type 37
of type page 37
Slides, lantern, 122.
Small caps 36
Small type for subsidiary matter 37
Smoothing curves, 117
Social sciences, literature sources 31
Solid, definition of 37
Spacing, in manuscript, 20.
in printing, 23.
in proofs 133.
in tables, 64
Species of plants and animals, 41, 66, 67
Specifications for publication 33.
Standard error of the mean, 45, 46
Statistical methods 3, 46.
Stimulation, 14.
Stub, definition of 63.
Style consistency of 24.
literary 9 13, 25.
models of 84.
Subject matter and arrangement suggestions on, 8.
Subscript letters, 40 130
Subsidiary matter type for 37
Substitution in manuscript, 31.
Summary 14
Superscript letters 37 66 130
Superscript numbers in citations, 89
in mathematical equations, 43.
referring to footnotes, 66
Symbols, mathematical, 40
chemical, 60
in graphs, 118.
reference 64.
Synonyms of scientific names, 58.

Table not capitalized, 40
Table for tracing graphs, 113
Table of contents, analytical, 100.
Tables preparation of 58.
Technical terms, definition of, 10.
when italicized, 42.
Temperature, 43.
Tenses, uses of [illegible]

Plants names of 58
Plate not capitalized 40
Plates, 106.
Plotting points in graphs 116
Point, definition of 37
Political sciences literature sources, 81
Power law 116
Prejudice 17
Preliminary outlines 4 8.
Prepublication review and revision 135
Present tense 20
Presentation inadequate, 25
Prints for half-tone reproduction 128
Probable error 45
Problem research criteria for choosing, 1
Proceedings *See* Periodicals.
Proofreading, 137
Proofs, galley 137
page 141
photoengraver's 141
Proper nouns capitalization of 33
Proportions for illustrations 103
Psychology literature sources 83
Publications *See* Books Bulletins Journals Periodicals Yearbooks
Punctuation revision of 24
rules for 21

Quad definition of 38.
Qualification of conclusions, 13
Quantity units of in tables 13.
in text 42.
Quarter compounds of 44
Query printer's 140
Questions, reader's answers to 10
Quotations 97

Reader's questions answers to 10
Recent advances series 78
Reduction of capital letter 31 120
of illustrations in reproduction, 133
of letters and numbers in illustrations 123
Referees, 135
Reference sources 71 78.
References to citations, 86 80
to footnotes of tables, 64
to footnotes of text 66
to illustrations, 12 134
to tables 12 65.
Rejection of manuscripts 137
Reliability and significance of measurements 46
Repetition revision to eliminate 24
Report engineering 7
Research problem criteria for choosing 1
Restoration of words, 30 133.
Results discussion of 12.
Review journals 76.
Reviewers 135
Revisions final 33.
of conclusions 3
of headings 101
of manuscript 22.
prepublication 135.
Roman numerals 46
Roman type 36

Terms ambiguity of 17
engineering abbreviation of 54
technical definition of 10
technical when italicized 42.
Text figures 106
Textbook observations to be mentioned in 13
The capitalized and italicized, 41
Time 43
Title condensed for running headlines 29 34
Titles of articles in periodicals 39 41
of books 39 41
of chapters in books 39 41
of illustrations 134
of paper typewritten 27
of papers choice of 11
of periodicals 41
of tables 62
Tone 10
Topics for title selection of 11
order of 9
Tracing graphs, table for 119
Transactions *See* Periodicals.
Transpositions in manuscript 33
in proofs, 133.
Type kinds and indication in manuscript 36
Type page 37
Typesetting machines 23, 36
Typewriting, character count in 35.
Typewritten copy preparation of 26
correction of 29
Typist, copy for 26.

Units of measurement in tables 63
of weight and measure 50
Unity in compositions 8.
in tables, 58.
Unsettled points 12

Variables, experimental 13.
mathematical relationships, 116
Variety names, capitalization of 57
Vernacular names, 57

Wash drawings, 108
Water-color drawings 108.
Weights and measures abbreviations for 50
Words, 10 25
foreign 42
Wrico lettering guides 123.
Writing a scientific paper 7

Yearbooks 75 88, 91

Zinc etchings 106 107 108 110 113
Zoölogical sciences literature sources 78.
Zoölogical terms capitalizing 39
italicizing, 41
rules for 57

necessary Perhaps a tabular statement will help

Term	*Genus*	*Differentiae*
animal	a living thing	not a plant
vertebrate	an animal	having a back bone or spinal column
quadruped	an animal	having four feet
mammal	a vertebrate	whose young feed on milk from the mother s breast
elephant[1]	a quadruped mammal	huge and nearly hairless, with trunk and tusks (the latter furnishing ivory)
fish	a vertebrate	cold-blooded, strictly aquatic, water-breathing
whale	a mammal	warm blooded, aquatic, air-breathing

In listing the differentiae dictionary-makers vary their tactics but retain an unvarying objective Their objective is to capture the meaning of the word. Here are a few of their various tactics·

Translation. A vertebrate is an animal with vertebrae, that is, **bones composing a spinal column.**

Exclusion. An animal is a living thing **other than a plant.**

Inclusion A platoon is **a part of a company**

Purpose or function. A blanket is a fabric **used as a bed covering**

Effect. A pungent substance or quality is one that **causes a sharp sensation, as of the taste, smell, or feelings.**

Exercise No. 83

Supply the *differentiae* for each term below

Term	*Genus*	*Differentiae*
1 novel	a narrative	
2 short story	a narrative	
3 drama	a narrative	
4 pantomime	a drama	
5 opera	a drama	

[1] All of these definitions may be made more precise, but not more meaningful to most people, by employing scientific language.

Exercise No. 84

Term	*Genus*	*Differentiae*
1 A compass	an instrument	(supply purpose)
2. A cadaver	a human body	(define by exclusion or negation)
3 A pompadour	a woman s hair style	(describe and note origin)
4 to stun	to shock	(state effect)
5 medieval	of the period	(translate and supply approximate dates)

CONNOTATION

Look at the denotation of **slang** in a good modern authority *The Concise Oxford Dictionary of Current English* (1934) defines it as "Words and phrases in common colloquial use but generally considered in some or all of their senses to be outside of standard English."

Now compare the connotations slang has for two noted writers·

Slang is language that takes off its coat, spits on its hands, and gets to work.—Carl Sandburg

Slang is the speech of him who robs the literary garbage carts on their way to the dumps.—Ambrose Bierce

Doubtless the editors of *The Concise Oxford Dictionary* and Messrs. Sandburg and Bierce would largely agree on the referent of the word **slang** They would unanimously and unhesitantly mark as **slang** expressions like **beat it, hot air, whoopee, stand up** ("disappoint") **square** ('not informed"), and **hep** ("informed")

Subjective attitudes have patently conditioned the pseudo-definitions of Sandburg and Bierce they have not said what the word **slang** means to most people but what it means to them. Where the referent may be easily pointed out—elephant and whale, for example —emotive assertion seldom twists denotation out of focus. (But remember Samuel Johnson s definition of **oats** "a grain which in England is generally given to horses, but in Scotland supports the people.') Where the referent may not be located—in abstractions like **truth,**

2. Charles gives *equivocal* answers to straightforward questions.
   a. Does he answer questions in the same manner that he is asked them?
   b. Are his answers delivered in a firm, even voice?
   c. Do his answers admit of more than one interpretation?
3. Don's *salient* characteristics are reticence and courtesy.
   a. Why do you consider them faults?
   b. Do they make him a salty character?
   c. Are they the characteristics most people notice?
4. Eliot said that "Only prose can give the full *gamut* of modern feeling."
   a. Can't poetry convey a like intensity?
   b. Does he suppose poetry has a narrower range?
   c. Is prose a better medium than poetry for opera?
5. Fedor makes *gratuitous* assumptions.
   a. Are they harmless?
   b. Are they groundless?
   c. Are they favorable to other people?
6. George has an *indefeasible* title to the chateau.
   a. Is it a dubious title?
   b. Is it one that he can't give away?
   c. Is it one that only he can give up?
7. Harold has suffered a *lethal* blow.
   a. Has he recovered?
   b. Will you attend his funeral?
   c. Has it made him sluggish?
8. Isaac discovered a *hiatus* in the manuscript.
   a. Did the break interfere with his comprehension of the manuscript?
   b. Did the climax come much before the end?
   c. Did the foreign words cause much difficulty?
9. John regarded the occurrence as *fortuitous*.
   a. Did he think it lucky?
   b. Did he think it unlucky?
   c. Did he think it accidental?
10. Keith dresses *impeccably*.
   a. Can't you find any fault with his attire?
   b. Does he always look like a pelican?
   c. Isn't he able to afford good clothes?

IV. Which man laughs (a) *caustically* (b) *sardonically* (c) *imperturbably* (d) *portentously* (e) *insidiously*?

1. Adolphus laughs sharply, bitingly, corrosively.
2. Barnabas laughs bitterly and ironically.
3. Charleston laughs with sly, deceitful, treacherous intent.
4. Darius laughs ominously—as if he expected something momentous (and possibly calamitous) to happen.
5. Emorah laughs calmly, without agitation or disquiet.

V. Which man might be characterized as (a) *amorphous*? (b) *dissident*? (c) *intransigent*? (d) *preposterous*? (e) *sycophantic*?

1. Fernando rejects any compromise; he is irreconcilable.
2. Gamaliel's personality seems to be shapeless—without any definite form.
3. Hannibal is a self-seeking flatterer; his motives are mean and his method servile.
4. Ignatius speaks and acts as though he lacked reason and common sense; what he says and what he does are equally absurd.
5. Japheth likes to differ with other people; dissent is his keynote.

VI. 1. If something is *feasible*, is it (a) eatable or (b) practicable?
2. If a man is subject to *vagaries*, is he likely to be (a) erratic or (b) hasty?
3. If an outbreak of disease is *sporadic*, is it (a) epidemic or (b) scattered?
4. If one believes in *euthanasia*, does he favor (a) scientifically controlled marriage or (b) "mercy killing"?
5. If a soldier exhibits *intrepidity*, is he (a) neurotic or (b) fearless?

VII. Match number and letter

1. regenerative	a. evident
2. totalitarian	b. exciting strong feeling
3. succulent	c. juicy
4. subjective	d. relating to taste
5. referent	e. derived from observation
6. proponent	f. restorative
7. patent	g. violent
8. emotive	h. supporter
9. conditioned	i. wholly
10. gustatory	j. what a word stands for
	k. palatable
	l. learned
	m. dictatorial
	n. computing machine
	o. derived from the mind

Ought we to avoid connotative words, then? Even were it possible, the answer would be, "Of course not!" They lend color and force to writing They make poetry (as well as advertising) popular They supply the emotional impulse to communication. Translate any great and moving passage of prose or poetry into denotative language and its power dissolves.

But distinguish between words intended to inform and words intended to convince (whether of Helen's loveliness, or the regenerative power of a patent medicine, or the virtues of Candidate X and his party)

Be purposeful in your own use of charged, highly connotative words and be critical of other people's

Read the running lines, but read between them, too

Exercise No. 85

Compare these "irregular adjectives."

1 I am conservative.
You are
He is

2 I am liberal.
You are
He is

3 I am thrifty
You are
He is

4 I am generous.
You are
He is

5 I am candid (straightforward)
You are
He is

6 I am diplomatic.
You are
He is

7 I am petite.
You are
He is

8 I am content.
You are
He is

9 I am masterful.
You are
He is

10 I am brave.
You are
He is

Mastery Test Number 18

The average score among college students who have taken this test: 38 out of a possible 50. How does your score compare?

I. Answer each question below

1 Which biblical character is *antediluvian?*
a. Abraham b Joseph c. Moses

2 Which work is an *artifact?*
a. An early Pueblo vase b Rodin's *Thinker* c. The Parthenon

3 Which product is the *detergent?*
a. Ivory soap b. Gem razor c. Sin sewing machine

4 Which quality generally precludes s cess?
a. Intelligence b Cynicism c. Defeat

5 Who are the *coeval* pair?
a. Nero and Hitler b. Adam and I
c. Caesar and Frederick the Great

6. Which is the *mundane* interest?
a. Concern about the afterlife b. Conc about one's job c. Concern about the ture of angels

7 Which nation practiced *genocide?*
a. The United States b The Republi France c. Nazi Germany

8 Who engages in *illicit* practices?
a. The philanthropist b The libra
c. The forger

9 Who probably is given to the most in sive *ratiocination?*
a. The writer of love stories b. The w er of books on logic c. The write books on anthropology

10. Who most likely believes in *metem chosis?*
a. The orthodox Catholic b The or dox Hindu c. The orthodox Jew

II. Below are examples of (a) *rhetorical quest* (b) *synecdoche*, (c) *metonymy*, (d) *ir* (e) *onomatopeia*. Identify

1 How the pretty ladies talk—
Tittle-tattle, tittle tattle!
Like their patters when they walk—
Pittle pattle, pittle pattle.
(Erasmus Darwin)

2. Where wast thou when I laid the founda of the earth? (J

3 Give us this day our daily bread. (Matth

4 Can gray hairs make folly venerable?
(Jun

5 No doubt but ye are the people, and wisd shall die with you. (J

III Which question indicates that the statement been understood?

1 Bob *abjured* wine, women, and song
a. Will he keep his resolution?
b. Is he really so dissolute?
c. Does he intend to continue his rake's progress?

2. Charles gives *equivocal* answers to straightforward questions.
   a. Does he answer questions in the same manner that he is asked them?
   b. Are his answers delivered in a firm, even voice?
   c. Do his answers admit of more than one interpretation?
3. Don's salient characteristics are reticence and courtesy.
   a. Why do you consider them faults?
   b. Do they make him a salty character?
   c. Are they the characteristics most people notice?
4. Eliot said that "Only prose can give the full gamut of modern feeling."
   a. Can't poetry convey a like intensity?
   b. Does he suppose poetry has a narrower range?
   c. Is prose a better medium than poetry for opera?
5. Felix makes *gratuitous* assumptions.
   a. Are they harmless?
   b. Are they groundless?
   c. Are they favorable to other people?
6. George has an *indefeasible* title to the chateau.
   a. Is it a dubious title?
   b. Is it one that he can't give away?
   c. Is it one that only he can give up?
7. Harold has suffered a *lethal* blow.
   a. Has he recovered?
   b. Will you attend his funeral?
   c. Has it made him sluggish?
8. Isaac discovered a *hiatus* in the manuscript.
   a. Did the break interfere with his comprehension of the manuscript?
   b. Did the climax come much before the end?
   c. Did the foreign words cause much difficulty?
9. John regarded the occurrence as *fortuitous*.
   a. Did he think it lucky?
   b. Did he think it unlucky?
   c. Did he think it accidental?
10. Keith dresses *impeccably*.
   a. Can't you find any fault with his attire?
   b. Does he always look like a pelicam?
   c. Isn't he able to afford good clothes?

IV. Which man laughs (a) *caustically* (b) *sardonically* (c) *imperturbably*, (d) *portentously* (e) *insidiously*?

1. Adolphus laughs sharply, bitingly, corrosively.
2. Barnabas laughs bitterly and ironically.
3. Charleston laughs with sly, deceitful, treacherous intent.
4. Darius laughs ominously—as if he expected something momentous (and possibly calamitous) to happen.
5. Emorah laughs calmly, without agitation or disquiet.

V. Which man might be characterized as (a) *amorphous*? (b) *dissident*? (c) *intransigent*? (d) *preposterous*? (e) *sycophantic*?

1. Fernando rejects any compromise: he is irreconcilable.
2. Gamaliel's personality seems to be shapeless—without any definite form.
3. Hannibal is a self-seeking flatterer: his motives are mean and his methods servile.
4. Ignatius speaks and acts as though he hated reason and common sense: what he says and what he does are equally absurd.
5. Japheth likes to differ with other people: dissent is his keynote.

VI. 1. If something is *feasible*, is it (a) eatable or (b) practicable?
2. If a man is subject to *vagaries*, is he likely to be (a) erratic or (b) hazy?
3. If an outbreak of disease is *sporadic*, is it (a) epidemic or (b) scattered?
4. If one believes in *euthanasia*, does he favor (a) scientifically controlled marriage or (b) "mercy killing"?
5. If a soldier exhibits *intrepidity*, is he (a) neurotic or (b) fearless?

VII. Match number and letter.

1. regenerative	a. evident
2. totalitarian	b. exciting strong feeling
3. succulent	c. juicy
4. subjective	d. relating to taste
5. referent	e. derived from observation
6. proponent	f. restorative
7. patent	g. violent
8. emotive	h. supporter
9. conditioned	i. wholly
10. gustatory	j. what a word stands for
	k. palatable
	l. learned
	m. dictatorial
	n. computing machine
	o. derived from the mind

WORDS CONFUSED AND ABUSED

CORE LIST

abortive	finesse	pensive
adulation	flagitious	periphrasis
bathos	immanent	posthumous
complement	inculcate	precipitate
compliment	inculpate	precipitous
composite	indict	puissant
deduction	indigent	raucous
disburse	indite	refractory
discrete	induction	risible
eclipse	levee	specie
effrontery	levy	species
ellipsis	lineament	spurious
emollient	littoral	sullen
emulous	lugubrious	supine
erotic	narcissistic	travesty
erratic	obsequies	turbid
factious	pathos	

In this chapter we present two reference lists

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WORDS CONFUSED

Ability, capacity

Some writers discriminate· **ability** implies the present and **capacity** the potential power to do something

He had the **capacity** for learning foreign languages, but he had no **ability** to speak any His **abilities** are not proportionate to his **capacities**.

Accept, except

Though frequently confused, these words are nearly antonyms. **Accept** means "to take what is offered." **Except** (as a verb) means "to exclude."

He was willing to **accept** all invitations, but all **excepted** him from their invitations.

Adverse, averse

Adverse means "opposed to" or "unfortunate." **Averse** means "disliking" or "unwilling"

The **adverse** criticism the play received made him **averse** to seeing it.

Affect, effect

As a verb, **affect** means "to act upon or influence." As a verb, **effect** means "to produce or accomplish."

Intemperate living will **affect** his health temperate living will **effect** his cure.

As a noun, **affect** has psychological overtones connoting "feeling, desire, emotion" As a noun, **effect** denotes "result or consequence."

The **effect** of an **affect** is to influence behavior or consciousness.

Allude, refer

Allude means 'to touch on indirectly" **Refer** means ' to mention directly"

Though he had **referred** to no poet, few critics doubted that he had **alluded** to Ezra Pound

Amount, number

Amount applies to mass or bulk, **number** to separate units.

They had a large **number** of children and a small **amount** of money

Apposite, opposite

Apposite means "well put with respect to time, place, or circumstances' **Opposite** means 'contrasting, in position or belief"

Though her politics had an **opposite** tendency from his, he granted that her comments were often **apposite**.

Apt, liable, likely

Strictly **apt** means "suited, pertinent," or "inclined, disposed," or "prompt to learn." **Likely** means "probable." **Liable** means "responsible for consequences," or "in danger of incurring something disagreeable."

He is not an **apt** writer and it is **likely** that Mr. Sharp will hold him **liable** for his imprudent letter

Beside, besides

Beside means "at the side of" **besides** means "additionally"

No one sat **beside** me: as a matter of fact, no one **besides** me sat, since I had the only chair

Between, among

Between is used when speaking of two things or persons, **among** when speaking of more than two.

He had a pumpkin-like head **between** his ears and a squash-like nose **among** his features.

Between is often used when speaking of more than two things, if each is considered individually or if they are related.

The three men have a single thought between them.

Who does not fear another war **between** the great powers?

Case, instance

Case applies to a person or thing illustrating the existence of something **Instance** applies to a person or thing illustrating the truth of something

Freud cites the **case** of Hamlet as an **instance** of the motive power exerted by repressed wishes.

Instance also denotes the person or thing illustrating a larger class.

The Comedy of Errors is not the best **instance** of Shakespearean comedy

Climatic, climactic

Climatic means "pertaining to or depending on weather (**climate**) **Climactic** means "pertaining to or forming the highest point (**climax**)"

The **climactic** event of the journey occurred among the geographic and **climatic** wonders of Shangri La.

Complacent, complaisant

Complacent means "self-satisfied, **complaisant** "amiable"

The **complacent** man is pleased with himself—his person, his accomplishments, his attainments—whereas the **complaisant** man tries to please others by his kindness, friendliness, or courtesy

Contemptible, contemptuous

Contemptible means "deserving scorn or disdain" **contemptuous** means "manifesting scorn or disdain."

In spite of his **contemptuous** attitude toward the scholarship of others, his own scholarly achievements are **contemptible.**

Continual, continuous

Continual implies a regular but interrupted succession, **continuous** a constant and uninterrupted succession.

Both the **continual** rains and the **continuous** roar of the cataract depressed the honeymooners.

Council, counsel

A **council** is an assembly met for consultation or summoned to give advice." **Counsel** denotes "advice or deliberation

Its **counsel** displeased the dictator and so he dismissed the **council.**

Credible, credulous

Credible means deserving belief **credulous** "too readily disposed to believe.

That he was **credulous** enough to buy Brooklyn Bridge seems hardly **credible.**

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Impassable, impassible
Impassable denotes "not passable—not capable of being moved through or over" Impassible denotes "incapable of suffering pain or harm; incapable of feeling"

Following his impassible guide the traveler tried to penetrate impassable roads.

Incredible, incredulous
Incredible means "not believable," incredulous "unbelieving"

The children recounted an incredible tale about killing a talking snake: their parents listened, then smiled incredulously

Individual, party
An individual is "a simple, separate entity" a party is "a group met for some purpose."

The individual, though he may at times be a member of a party must never submerge his identity as an individual.

Legally party may refer to "a person involved in a transaction."

If the party to the deed signs the affidavit, he will be released from further responsibility

Used in non-legal contexts to denote "a person," party is substandard.

Imply infer
Imply means "to suggest or hint," infer "to conclude or gather

The chairman of the Selective Service Board implied that a truce might result in fewer draft calls, college students inferred from his statement that they might continue their studies with less fear of military interruption.

Ingenious, ingenuous
Ingenious means "clever inventive, resourceful" Ingenuous means "artless, open, frank"

His ingenuous manner was misinterpreted as an ingenious tactic to gain others confidence

Last, latest
Last refers to the final item in a series, latest "the most recent."

The Old Man and the Sea is Hemingway's latest book—not, I hope, his last.

Learn, teach
Learn means "to gain knowledge or acquire skills," teach to impart knowledge or show how "

He learned how to juggle so that he might teach the art to his students.

Leave let
Leave means "to go away from or depart,' let to allow or permit

Let me pack and leave.

Lie, lay
Lie, an intransitive verb, means ' to recline" lay a transitive verb means "to put or place "

Lie (to recline)
I lie down when I'm tired. (Present)
I lay down last evening (Past)
I have often lain down when exhausted. (Perfect)

Lay (to place)
Lay that pistol down. (Present)
We laid our money on the counter (Past)
We have laid our plowshares beside our scythes. (Perfect)

Lie meaning 'to utter a falsehood" offers no difficulties. It is regular and intransitive. I lie, I lied, I have lied.

Laudable laudatory
Laudable means worthy of praise, laudatory "giving praise."

The reviewer is uniformly laudatory, even when the work is not at all laudable.

Deprecate, depreciate

Deprecate means "to disapprove (usually, with regret) , **depreciate** means "to lessen the price or value of a thing or person."

He **deprecated** the growing tendency to **depreciate** learning

Disinterested, uninterested

In discriminating usage, **disinterested** means 'impartial," **uninterested** "without attention or curiosity "

A good judge is always **disinterested** but never **uninterested** in the case he is trying

Elicit, illicit

Elicit means "to draw-out," **illicit** "unlawful."

The attorney was able to **elicit** details of their **illicit** business

Emigrant, immigrant

An **emigrant** leaves one country to enter another An **immigrant** enters one country from another

Every **immigrant** must first have been an **emigrant** the stress in the former word is on entering, in the latter word on leaving

The French **emigrants** sailed from Le Havre The French **immigrants** arrived at New York

Eminent, imminent

Eminent means 'celebrated or conspicuous" **imminent** means "impending, likely to occur at any moment."

The **eminent** Roman warned his country of **imminent** disaster

Enervate, innervate

Enervate means to "deprive of strength or force ', **innervate** means "to stimulate through the nerves' or ' to supply with nerves."

A small current of electricity **innervated** the dog a large one **enervated** it.

Farther, further

Farther and **further** may be used interchangeably, though some discriminating writers prefer **further** when they intend "more' or "more extended."

Right. Heaven is no **further** (or **farther**) on sea than on land

Acceptable I have nothing **farther** to say
Preferable I have nothing **further** to say

Fewer, less

Fewer applies to number—to things that are counted **Less** applies to quantity—to things that are measured

The **fewer** one's possessions, Thoreau claimed, the **less** one's anxiety

Flaunt, flout

Flaunt means "to display ostentatiously" **flout** means "to treat contemptuously "

He **flouts** custom and **flaunts** his lack of respect for convention.

Former, latter

Former applies to the first of two things mentioned, **latter** to the second

"Be fruitful" and "Be short" Cotton Mather intended the former motto for himself, the latter for his visitors.

Note. If more than two things are mentioned, prefer **first** and **last.**

Bacon counseled reading, conference [discussion], and writing, observing that the first made a full man, the second a ready man, and the last an exact man.

Fortuitous, fortunate

Fortuitous means ' accidental." **fortunate** lucky

Not all **fortuitous** events are **fortunate.**

Healthy, healthful

In discriminating usage, **healthy** means 'being healthy (well, strong vigorous)", **healthful** means "promoting health

A **healthful** regimen Benjamin Franklin said, makes a man **healthy,** wealthy and wise.

Illusion, delusion

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The fistic exploits of John L. Sullivan have been so embroidered and exaggerated that they are **legendary** Historians of the Twenty-Second Century will perhaps regard him as a **mythical** (or **mythic**) creation.

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A total of one thousand ballots was cast for the three candidates Candidate A received one hundred votes, Candidate B received three hundred votes, Candidate C received six hundred votes Candidate C, therefore, garnered the **majority** of the votes, his **plurality** was three hundred votes

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Persons refers to particular human beings, **people** refers to human beings collectively, especially when they form a characteristic group

The **people** of the United States have always believed that no **persons** ought to be convicted of any crime without trial by jury

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He **aggravated** injury by insult.

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Alibi means "a plea of having been elsewhere when an act was committed"

Sutton's **alibi**, that he was in jail when Arnold Shuster was murdered, seemed flawless.

Colloquially, **alibi** has come to mean "any excuse."

Awful

Awful, in formal English, means "appalling, inspiring awe, fear, reverence." Colloquially, it means "very—usually, very good or very bad.'

The prophets warned of the **awful** wrath of God.

The **awful** shadow of some unseen Power
Floats though unseen among us
(Shelley)

Contact

In the sense of 'get in touch with," **contact** is an overused colloquialism. Prefer **communicate with, write to, talk to, meet, telephone, call upon, inform**

Couple

Sort colloquially **couple** means "two things of the same sort that are associated or joined together, a pair"

Jack Spratt and his wife are an eccentric **couple.**

Cute

Cute is colloquial for **shrewd, petite, dainty, charming, pretty,** and the like (almost, what one likes) An overworked word, it deserves a rest—perhaps interment.

Data

Data is the plural form of **datum.** Theoretically one ought to say "This datum is enough" and "These data are enough." However **data** often connotes a singular idea and may properly function as a singular noun.

The **data** of science differ (or differs) from the **data** of ethics.

Disremember

Disremember is a barbarism for "do not remember." It is often used humorously—too often.

Elegant

Elegant means "characterized by richness, grace, polish, refinement." It is generally applied to writing, speech, style, buildings, dress, manners, and the like. Pope's couplets may be termed elegant except colloquially hamburgers may not.

Enthuse

Enthuse is a back formation, not in good formal use. Colloquially it means "be enthusiastic" or "make enthusiastic." It ought to be avoided since many people detest the usage

Etc

Etc. is an abbreviation of **et cetera,** "and so forth." It ought rarely to be used in formal writing and never to be preceded by **and.**

Factor

Factor is an overworked word, used indifferently for **force, circumstance, influence, element, aspect, phase,** and a variety of other words. Prefer the one that realizes your intention most nearly Use **factor** when you intend "One of the circumstances or conditions that tend to bring about a given result"

Strength, not intelligence, was the chief **factor** in Samson's success.

Flair

Originally **flair** meant "a keen sense of smell It has come to mean "a natural aptitude" But it has been used, and misused, too often. Avoid Derbies became the **flair**" say "fashion" instead. You may correctly say "She had a **flair** for the dramatic gesture"—but you would do better to find a brighter word

Grand

Grand, like **fine, terrific, swell, wonderful, elegant,** is a general utility word which has lost much of its utility Prefer the exact word—**absorbing, stimulating, delicious, amusing,** or another

Hanged

A man suspended by the neck until he is dead is preferably **hanged.** Pictures, draperies, trophies may be properly **hung**

Irregardless

Irregardless and **disregardless** are nonstandard. Employing either humorously has become trite.

Literally

Literally means "word for word—not imaginatively or figuratively" Unless he disintegrates like a shell, no man **literally** explodes.

Literally and **figuratively** are properly antonyms, but in loose employment they function more generally as synonyms.

Lousy

Lousy is a vulgar colloquialism for "plentiful" or "plentifully supplied," as well as for "poor inferior" or "dirty disgusting" In formal usage it means "infested with lice." Avoid the colloquial usage as trite, if for no other reason.

Mad

Colloquially **mad** means "angry Formally, it means "insane," or "frenzied

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The **awful** shadow of some unseen Power
Floats though unseen among us
(Shelley)

Contact

In the sense of "get in touch with," **contact** is an overused colloquialism. Prefer **communicate with, write to, talk to, meet, telephone, call upon, inform.**

II. One question merits yes for an answer. Which—a, b, or c?

1. If a scheme proves *abortive*, does it
   a. succeed?
   b. come to nothing?
   c. cost more than it is worth?
2. If a man's attempts to ice-skate are *risible*,
   a. do they excite laughter?
   b. are they dangerous?
   c. do they arouse admiration?
3. If a woman's voice is *raucous*
   a. is it pleasing to the ear?
   b. does it grate?
   c. is it too loud?
4. If a book is published *posthumously*
   a. does the author pay for its publication?
   b. does the author publish under another name or no name at all?
   c. is the author dead?
5. If you call someone a *travesty* of a man, do you mean that
   a. he is a superman?
   b. he is a hard-worker?
   c. he is a grotesque imitation of a man?

III. Select the word, *a* or *b*, that is synonymous with the italicized word or words.

1. Alice walked along the *shore*.
   a. literal b. littoral
2. Babs had distinctive *features*, especially as seen in outline.
   a. liniments b. lineaments
3. Carol thought her experiences were *separate and distinct*.
   a. discreet b. discrete
4. Dinah applied a *soothing application* to the wound.
   a. emolument b. emollient
5. Eve's was a *contentious* spirit.
   a. factitious b. factious
6. Frances *expended* her money carefully.
   a. disbursed b. dispersed
7. Grace thought that God was *indwelling*.
   a. immanent b. imminent
8. Helen's thoughts were *disturbed* as water on a stormy day.
   a. turgid b. turbid
9. Ilse wanted no mourners at her *funeral rites*.
   a. obsequies b. obsequious
10. June preferred *circumlocution* to direct speech.
    a. periphrasis b. periphery

IV. Answer each question.

1. Which action exemplifies *effrontery*?
   a. A stranger without authority reads your mail.
   b. A man who has only an average income boasts of the "big deals" in which he is involved.
   c. A woman gossips maliciously about her neighbors.
2. Which remark betokens *adulation*?
   a. "Fold your tents like the Arabs and silently steal away."
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   c. "Though there are several errors in your account, it is accurate on the whole."
3. Which is the *spurious* coin?
   a. A small gold disk, it is stamped 55 B.C.
   b. A large bronze disk, it is without a date.
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4. Which is the *composite*?
   a. A portrait blending several portraits—of Washington, Jefferson, and Lincoln, for example.
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5. Which man exhibits *finesse*?
   a. He reads poetry, visits museums, attends concerts.
   b. He plays poker and returns the sums he wins.
   c. He manages to steal a strong silent man's dentures while they are being worn.

V. Which of the men may be characterized as a. *sullen*? b. *narcissistic*? c. *refractory*? d. *pensive*? e. *puissant*? f. *lugubrious*? g. *indigent*? h. *supine*? i. *emulous*? j. *flagitious*?

1. Ambrose is eager to equal or excel his fellows.
2. Barnaby is grossly wicked.
3. Caleb is necessitous.
4. Dunstan is almost humorously doleful.
5. Edwin is a mighty man.
6. Fergus is thoughtful and melancholy at once.
7. Godwin is difficult to manage—obstinately unyielding.

Muchly

Muchly says nothing that **much** does not say and says it illiterately

Percent

Use **percent** after a numeral only

Fifty **percent** of the men and as large a percentage of the women are married

Protagonist

Protagonist means "the main character in a drama or story," and, by extension, "the leading figure in any action" Consequently, there is nothing to be gained, and brevity to be lost, by saying "the chief protagonist"

Quite

In formal English, **quite** means "wholly, entirely" or "really, positively" Colloquially, it means "to a considerable extent, very" Distinguish

Thusly

Thusly is substandard for thus.

Transpire

Literally, **transpire** means "to emit through the pores." By extension, it has come to mean "to leak out, to become known."

The secret **transpired** to foreign agents

In the sense of "to happen," **transpire** is frowned upon by many authorities.

Unique

Unique means "the only one of its kind" Thus, it may not function as a loose substitute for **unusual, rare,** or **outstanding**

The **unique** manuscript of *Beowulf* is in the British Museum.

Mastery Test Number 19

The average score among college students who have taken this test: 34 out of a possible 50. How does your score compare?

I. From the two words italicized, select the one that fits the context.

1 Quincy liked situations (in life and literature) that awakened his sympathies. Quintus liked similar situations—even when they were carried to absurd lengths.
Quincy has a taste for , Quintus does not object to
bathos, pathos

2 Raoul, by insistent repetition, impressed principles of morality on his pupil's mind. Ralph involved his pupil in crime.
Raoul morality in his pupils; Ralph his in crime.
inculcates, inculpates.

3 Shem refused to bring formal charges against the criminal. Shawn refused to write his oral charges.
Shem refused to Shawn to
indict, indite

4 Thurston expresses admiration of his wife's virtues. Thaddeus supplies the qualities in which his wife is deficient.
Thurston his wife Thaddeus his wife.
complements, compliments

5 Ulysses brings on crises prematurely Urban performs rash and hasty deeds.
Ulysses crises, Urban performs deeds.
precipitous, precipitates

6. Vernon reasons from particular facts or individual cases to a general conclusion. Valentine reasons from the general to the particular from known principles to unknown.
Vernon engages in Valentine in
deduction, induction.

7 Wesley observed that the moon obscured the sun by coming between it and the earth. Willis observed that the construction had words omitted which, however, were understood in context.
Wesley observed an , Willis an
eclipse ellipsis

8 Xavier liked mankind. Xerxes liked gold and silver coin.
Xavier liked the human , Xerxes liked

species, specie

9 Yardley wrote amatory poetry Yussuf pursued an eccentric course.
Yardley's poetry was ; Yussuf's course was
erotic erratic

10. Zachary attended the President's reception. Zebedee opposed the recent tax-collection.
Zachary attended the ; Zebedee opposed the
levee, levy

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8 Hobart is silent in an ill-humored way
9 Ivor is inordinately in love with himself
10 Jarvis is indolent and sluggish.

Postscript

After you master the roots and prefixes in this final postscript, continue your review of the earlier chapters and postscripts Retain your mastery by continuous usage, review, and frequent self-testing

Roots

Root	Current Words
Meaning	follow
sequ, secu (Latin)	sequel, suit, sequence, subsequent, sect, sue, persecute, prosecute
Meaning	put, place
pon, pos (Latin)	pause, preposition, posture, propound, dispose, impose, expose
Meaning	go take steps
grad, gress (Latin)	degrade, downgrade, retrograde, transgress, aggressive, egress, digress
Meaning	happy pleasing
eu (Greek)	euphemism, eugenics, eulogy euphony euthanasia, euphoria
Meaning	see
scop (Greek)	telescope, periscope, microscope, episcopal, bishop kaleidoscope

Exercise No. 86

Complete the following sentences by choosing the appropriate word from the list below

1 Do you seriously ———— the theory that ——— is a ———— for genocide?
2 Men need ———— vision to keep in focus the ever-changing but not always lovely pattern of modern life.
3 John Milton belonged to a Protestant ———— strongly opposed to what he called the "overseer" methods of the ————.
4 A society in which ———— of the law is the norm has pitifully ————
5 How can we believe the testimony of a ———— whose ———— borders on giddiness.

deponent	euthanasia	episcopacy
sect	retrograded	euphoria
kaleidoscope	euphemism	propound
transgression		

Prefixes

Prefix	Current Words
Meaning	equal
equi (Latin)	equanimity equivalent, equivocate, equidistant, equilibrium
Meaning	both
ambi (Latin)	ambivalent, ambidextrous, ambiguous
Meaning	back
retro- (Latin)	retroactive, retrogress, retrospec
Meaning	both, around, on both sides
amphi (Greek)	amphibious, amphitheater, amphibian, amphibrach
Meaning	current
neo- (Greek)	neo-classic, neologism, neophyte

Exercise No. 87

Choose the appropriate word from the parentheses

1 In (a, regression b. retrograde c. retrospect) I think that had Nathan Hale (a. synthesized b equivocated c. retrogressed) he need not have been hanged.
2 Because Matthew Mark, and Luke present similar points of view in summarizing the life of Jesus, their texts are often called the (a. synopsis b synaptic c. synoptic) Gospels.
3 An apprentice actor may display poise and (a equivocation b. equanimity c. ambivalence) despite his being a (a. neophyte b amphibrach c. neologism)
4 Accidents affecting the middle ear may disturb one's (a. equanimity b. equidistant c. equilibrium)
5 The power of one's memory depends, according to one theory in part upon the number of neural or (a. synaptic b. synoptic c. synthetic) connections previously established.

DICTIONARIES, GENERAL AND SPECIAL THEIR USE AND SELECTION

CORE LIST

assuage	fustian	parcels
avatar	gingerly	patriarch
centripetal	homiletic	peruse
corporal	hypochondriac	picayune
cursory	incunabula	propitiatory
desultory	iniquity	quidnunc
docile	inordinate	rationale
dormant	lethargic	remorse
dotage	lour	sacerdotal
eclectic	lucent	sequestrate
eleemosynary	lurid	taciturn
elliptical	matrix	temporal
ethnic	mellifluous	transpire
exculpate	mordant	unconscionable
execrable	myriad	undulate
fecund	nostrum	vacuous
fiery	oligarch	

GENERAL DICTIONARIES

Your ten-year-old son has just read in a newspaper that a "network of enemy agents has been arrested." He asks you to define network, but you send him to the family dictionary. An heirloom, the handsome two-volume set, compiled by the famous Dr. Samuel Johnson, has been the household word-book for generations. Junior finds that **network** means "Anything reticulated or decussated, at equal distances, with interstices between the intersections." Be grateful that the poor boy had not sought in Johnson's dictionary words like cough, "A convulsion of the lungs, vellicated by some sharp serosity" or **pension** "... In England it is generally understood to mean pay given to a state hireling for treason to his country."

Dr. Johnson in England and Noah Webster in America made outstanding contributions to lexicography. But today their dictionaries have historical rather than practical value. You should, therefore, own one of the reputable modern abridged dictionaries. We provide sample pages from two of the best:

Webster's New Collegiate Dictionary (*NCD*) 125,000 words, G & C. Merriam Co.

The American College Dictionary (*ACD*) 132,000 words, Harper and Bros.[1]

ABRIDGED DICTIONARIES

Study these pages carefully. Observe that these dictionaries provide considerably more than definitions.

1. They help you to master spelling by providing accurate syllabication of each word, capitalization, hyphenation, variant spellings (where more than one is acceptable), correct spellings of principal parts of verbs, plurals of nouns, cases of pronouns, comparative and superlative forms of irregular adjectives and adverbs.
2. They are the final authorities on pronunciation.
3. They offer extensive etymologies.
4. They label words as **colloquial, slang, archaic, obsolete,** etc.
5. They list synonyms and antonyms.

The better abridged dictionaries include also such items as biographical data, gazeteer, tables of measurement, abbreviations, proofreaders' symbols, and the like.

Definitions, of course, remain central to your purpose. The arrangement of definitions in the *NCD* and the *ACD* illustrate graphically the care you need to exercise in choosing an appropriate definition. Consider the following definitions of **nice**:

NCD

1 *Obs.* a. Foolish; silly. b. Lewd, wanton. 2. *Archaic.* Affecting coy reserve; shy. 3. Fastidious;

[1] Other reputable abridged dictionaries include:
Webster's New World Dictionary. World Publishing Co.
New College Standard Dictionary. Funk and Wagnalls Co.
Macmillan's Modern Dictionary. The Macmillan Co.
Winston's Simplified Dictionary. J. C. Winston Co.

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hence, finical, also refined, discriminating 4 Demanding close discrimination, delicate handling or the like. 5 Displaying, or characterized by, close discrimination, delicate treatment; subtle as a *nice* distinction. 6. Susceptible to fine distinctions, or able to make them delicately discriminative, hence, of instruments, methods, etc., minutely accurate. 7 Scrupulous; punctilious. 8 Pleasing agreeable. 9 Properly modest, well-mannered.

ACD

1 Pleasing· agreeable, delightful, *a nice visit.* 2 amiably pleasant; kind *they are always nice to strangers* 3 characterized by or requiring great accuracy precision, skill or delicacy *nice* workmanship 4 requiring or showing tact or care; delicate. 5 showing minute differences· minutely accurate, as instruments. 6. minute, fine, or subtle, as a distinction. 7 having or showing delicate and accurate perception *a nice sense of color* 8 refined as to manners, language, etc. 9 suitable or proper *not a nice song* 10 carefully neat as to dress, habits, etc. 11 dainty or delicious, as food. 12. dainty as to food. 13 *Obs* coy, shy, or reluctant. 14 *Obs* foolish.

How do the dictionaries differ? The NCD places the earliest meanings first, whereas the ACD puts the most recent meaning first The NCD stresses historical development and semantic changes, the ACD aims to save the reader time by recording first those usages he may be most likely to need Once you understand their logic of arrangement, either dictionary will satisfy your needs. But never grasp at the first definition listed—always choose the one appropriate to your context.

Exercise No. 88

Answer all the following questions with the aid of your dictionary

1 Total the number of meanings you find for each of the following words.

strike — point — round
go — hand — direct
run — cast — square
walk

2 Syllabify the following words.

illustration — cucumber — satisfactory
intelligible — poliomyelitis — privilege
ephemeral — board — dream
dictionary — viscid — alienate
language — plateau — pronunciation

3 Give the correct spellings of the principal parts of the following verbs.

lie — drink — raise
sit — lay — wring
rise — set — slay
write

4 Give the correct pronunciation of the following words.

Tuskegee Institute — heinous
grimace — Worcester
impetigo — Eamon de Valera
inexplicable — status
phthisis — gaseous
cholmondel — clapboard

5 Which of the following words ought to be capitalized?

french — aspidistra — geometry
negro — history — communism
indian — english — aspasia
osgood

6 Indicate the correct usage *label* after each of the following words.

eftsoon — hotrod — dead pigeon
boom town — billabong — absquatulate
ywis — caboose — big-shot

UNABRIDGED DICTIONARIES

In addition to the abridged dictionaries, you should familiarize yourself with the standard **unabridged** dictionaries. These works, upon which abridgements are based, contain far more words than abridged dictionaries (Webster's *New International Dictionary of the English Language*, second edition, G & C. Merriam Co., 1934 contains 600 000 entries), and range encyclopedically from definitions to the history of the English language. Two standard unabridged dictionaries *other than* the *New International* are *The New Century Dictionary of the English Language*, P F Collier & Sons, 1927 and the *New Standard Dictionary of the English Language*, Funk and Wagnalls Company, 1915

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glad (glăd), *adj.*, gladder, gladdest. 1. delighted or pleased (fol. by *of*, *at*, etc., or an infinitive or clause) ... 2. characterized by or showing cheerfulness, joy, or pleasure, as looks, utterances, etc. 3. attended with or causing joy or pleasure: *a glad occasion, glad tidings.* ... 4. *Archaic.* to make glad. [ME; OE *glæd*, c. Icel. *glathr* bright, glad, D *glad* and G *glatt* smooth; akin to L *glaber* smooth] —**glad'ly**, *adv.* —**glad'ness**, *n.* —**Syn.** 1. happy, delighted, gratified. 2. merry, joyous, cheerful. —**Ant.** 1. sad.

Gla·mor·gan·shire (glə môr'gən shĭr', -shər), *n.* a county in SE Wales. 155,000 pop. (est. 1946); 816 sq. mi. *Co. seat:* Cardiff. Also, **Gla·mor'gan.**

glare[1] (glâr), *n.*, *v.*, **glared, glaring.** —*n.* 1. a strong, dazzling light; brilliant luster. 2. dazzling or showy appearance; showiness. 3. a fierce or piercing look. —*v.i.* 4. to shine with a strong, dazzling light. 5. to be too brilliantly ornamented. 6. to be intensely bright in color. 7. to be conspicuous. 8. to look with a fierce or piercing stare. —*v.t.* 9. to express with a glare. [ME *glaren*, c. MD and MLG *glaren*; akin to GLASS (cf. OE *glæren* glassy)]
—**Syn.** 4. See **shine.** 8. GLARE, GLOWER, GLOAT all have connotations of emotion which accompany an intense gaze. ... To GLARE is to look piercingly or angrily ... To GLOWER is to look fiercely and threateningly ... To GLOAT meant originally to look with exultation, avaricious or malignant, on something or someone ... Today, however, it may imply simply inner exultation.

glare[2] (glâr), *n.* 1. a bright, smooth surface, as of ice. —*adj.* 2. bright and smooth; glassy: *glare ice.* [special uses of GLARE[1]]

G-man (jē'măn'), *n.* an agent for the FBI.

gnome[1] (nōm), *n.* one of a species of diminutive beings fabled to inhabit the interior of the earth and to act as guardians of its treasures, usually thought of as shriveled little old men; a troll. [t. F, t. NL (Paracelsus)] —**gnom'ish**, *adj.* —**Syn.** See **goblin, sylph.**

gnome[2] (nōm), *n.* a short, pithy expression of a general truth; aphorism. [t. Gk.: judgment, opinion, maxim]

gno·mic (nō'mĭk, nŏm'ĭk), *adj.* 1. like or containing gnomes or aphorisms. 2. of, pertaining to, or denoting a writer of aphorisms, esp. certain Greek poets. Also, **gno'mi·cal.** [t. Gk.] —**gno'mi·cal·ly**, *adv.*

go (gō), *v.*, **went, gone, going,** *n.*, *pl.* **goes.** —*v.i.* 1. to move or pass along; proceed. 2. to move away or out; depart (opposed to *come* or *arrive*). 3. to keep or be in motion; act, work, or run. ... 5. to continue; be habitually in a state or condition: *to go armed.* ... awarded, transferred, or applied to a particular recipient or purpose. 11. to be sold: *the property went for a song.* 12. to conduce or tend: *this only goes to prove the point.* 13. to turn out; result: *how did the game go?* 14. to belong; have a place: *this book goes on the top shelf.* 15. (of colors, etc.) to harmonize; be compatible; be suited. 16. to act or operate with sound, as a bell or a gun; make a certain sound: *the gun goes bang.* 17. to be phrased ... 18. to be discharged or exploded. 19. (fol. by *to*) to resort; have recourse: *to go to court.* 20. to get the facts; find out (fol. by *behind*). 21. to be given up; be worn out; be lost or ended. 22. to die. 23. to fail; give way. 24. to begin; come into action: *here goes!* 26. to attack (fol. by *at*). 27. to be contained (fol. by *into*): *4 goes into 12.* 28. to contribute in amount or quantity; be requisite: *the items which go to make up a total.* 29. to share equally (fol. by *partners*): *to go partners.* 30. to be about, intending, or destined (used in the pres. part. fol. by an infinitive): *he is going to write.* 32. *Naut.* to change course by tacking or wearing. 33. *Colloq.* to endure or tolerate: *I can't go his preaching.* 34. *Colloq.* ...
35. Some special verb phrases are:
go about, 1. to move about; circulate. 2. to be enough for all.
go back on, *Colloq.* 1. to fail (someone); let (someone) down. 2. to fail to keep (one's word, promise, etc.)
go by, 1. to pass. 2. to be guided by.
go down, 1. to descend; slope down. 2. to be defeated. 3. *Brit.* to leave the University at the end of the term or permanently (according to context).
go in for, to make (a thing) one's particular interest.
go on, 1. to go ahead; proceed. 2. to manage; do. 3. to behave; act. 4. to begin to operate.
go out, 1. to come to a stop; end: *the light went out.* 2. to go to social affairs, etc.
go over, 1. to read or reread. 2. to repeat. 3. to look at again.
go through with, to complete; bring to a finish.
go up, 1. to rise or ascend; advance. 2. *Brit.* to go to the University at the beginning of term.
go with, *Colloq.* 1. to harmonize with. 2. to frequent the society of.
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G.O., general order.

Go·a (gō'ə), *n.* a district of Portuguese India, on the Arabian Sea, ab. 250 mi. S of Bombay. 624,177 pop. (1940); 1535 sq. mi. *Cap.:* Panjim.

Goe·thals (gō'thəlz), *n.* **George Washington,** 1858–1928, U.S. major general and army engineer in charge of building the Panama Canal.

-gon, a suffix denoting geometrical figures having a certain number or kind of angles, as in *polygon, pentagon.* [t. Gk.: m. *-gōnos* (neut. *-gōnon*) angled, -angular]

gor·mand (gôr'mənd), *n.* gourmand.

gos·pel (gŏs'pəl), *n.* 1. the body of doctrine taught by Christ and the apostles. ... in the first four books of the New Testament. 4. (*usually cap.*) one of these books. 5. (*often cap.*) *Eccles.* an extract from one of the four Gospels, forming part of the Eucharistic service in certain churches. 6. *Colloq.* something regarded as true and implicitly believed: *to take for gospel.* 7. a doctrine regarded as of prime importance: *political gospel.* —*adj.* 8. pertaining to the gospel. 9. in accordance with the gospel; evangelical. [ME *go(d)spel*, OE *godspel*, f. *god* GOOD + *spell* tidings (SPELL[2]), trans. of L *evangelium.* See EVANGEL]

gour·mand (gŏŏr'mənd; *Fr.* gōōr mäN'), *n.* one fond of good eating. Also, **gormand.** [late ME, t. F: glutton-ous, der. *gourmet* GOURMET]

goût (gōō), *n.* *French.* taste; perception. [F, t. L *gustus* taste]

ăct, āble, dâre, ärt; ĕbb, ēqual; ĭf, īce; hŏt, ōver, ôrder, oil, bŏŏk, ōōze, out; ŭp, ūse, ûrge; ə = a in alone; ch, chief; g, give; ng, ring; sh, shoe; th, thin; ᵺ, that; zh, vision. See the full key on inside cover.

b., blend of, blended; c., cognate with; d., dialect, dialectal; der., derived from; f., formed from; g., going back to; m., modification of; r., ... t., taken from; ?, perhaps. See the full key on inside cover.

SPECIAL DICTIONARIES

Dictionaries exist for almost any subject you can name. We cannot, of course, include all them, but we have selected some of the more important and useful reference volumes you may have occasion to consult.

1. Great Scholarly Dictionaries. *The Oxford English Dictionary* (OED) a ten-volume work published by Oxford University Press between 1888 and 1933 is supreme among dictionaries. It provides all the information contained in unabridged dictionaries, plus quotations from significant authors to illustrate the historical development of word-meanings:

abominate *v* *1 To feel extreme disgust and hatred* towards, to regard with intense aversion; to abhor ... 1644 Bulwer *Chironomia* 53 "Who refuse, abominate some execrable thing" ... 1866 ... *Dutch Republic* "Influential persons abominated the cruel *form* of amnesty which had been devised.

The *OED* affords indispensable aid in tracing the career of words in the world [1]

A Dictionary of American English on Historical Principles (*DAE*) published in four volumes by the University of Chicago between 1938 and 1944, traces essentially American words and phrases in use up until 1900-

bodaciously—adverb, dialect. (Perhaps a fanciful extension of bodily) Completely thoroughly ... 1878 Beadle *Western Wilds* 118 "I ... man ... who had been 'bodaciously chawed up' to use his own language, by a grizzly bear"

In 1951, the University of Chicago published *A Dictionary of Americanisms*, two volumes of words culled from the *DAE* to represent usages whose origin is unmistakably American.

absquatulate—verb. (Of fanciful classical formation based on ab + *squat*, meaning the reverse of *to squat*, i.e., to decamp, make off) intr To depart, go away ... Slang. Obs. ... 1840 *Buckskin Mose.* The vagabond had 'absquatulated' with the whole of the joint-stock funds."

[1] The Shorter Oxford Dictionary two volumes, is a useful abridgment of the OED

2 Synonyms, Antonyms and Usage. The Merriam Webster *Dictionary of Synonyms* and Roget s *Thesaurus* have already been discussed in the chapters on synonyms and antonyms.

You will find useful, too H W Fowler s *A Dictionary of Modern English Usage*, revised edition, Oxford University Press, 1946 Wittily written, linguistically sound, Fowler s book contains a diversity of articles—on cliché, idiom, jargon, technical terms, pronunciations, and the like. It deserves a place on your desk where it can be readily seen and used. *A Writer s Guide and Index to English* by Porter G Perrin, revised edition, Scott, Foresman, 1950 is the American analog to Fowler

3 Dictionaries of Slang Argot, and Cant. *The American Thesaurus of Slang* edited by L. V Berrey and M Van Den Bark Crowell, 1953 contains not only colloquial and slang terms in general use, but also special slang and argot drawn from professions, trades, commerce, entertainment, sports, and the like. The section on etymology is too brief but nevertheless proves interesting

Butter and egg man. A night-club spendthrift. Literally a dairy produce man, figuring in two accounts. 1 A nameless spender in Texas Guinan s cafe (1924) who so introduced himself 2. Master of ceremonies Harry Richmond's introduction (1923) of the liberal Sam Balcom, dairy wholesaler to N Y cabarets.

A Dictionary of the Underworld edited by Eric Partridge, Macmillan, 1950 defines and traces the origins of British and American cant and argot used by thieves, drug addicts, tramps convicts, and the like.

Send up the river To send a convicted man to Sing Sing prison. *up the river* In Sing-Sing Prison. 1891 *Darkness and Daylight* 1893 *Confessions of a Convict* Sing-Sing Prison is at Ossining on the Hudson River and some 30 miles north of New York City

[By 1924 the expression had been generalized to mean any prison. ed. note]

4 Dictionaries of the Arts and Social Sciences. We list below a selection of special dictionaries you should consult for more de-

glad

glad (glad) *adj.*, gladder, gladdest. 1 delighted or pleased (fol. by *of*, *at*, etc., or an infinitive or clause): *to be glad at the news; glad to go; glad that one has come.* 2. characterized by or showing cheerfulness, joy, or pleasure, as looks, utterances, etc. 3 attended with or causing joy or pleasure: *a glad occasion, glad tidings.* —*v.t.* 4. *Archaic* to make glad. [ME; OE *glæd*, c. Icel. *gladr* bright, glad, D *glad* and G *glatt* smooth; akin to L *glaber* smooth] —**glad/ly**, *adv.* —**glad/ness**, *n.* —**Syn.** 1. pleased, delighted, gratified. 2. merry, joyous, cheerful. —**Ant.** sad.

Gla·mor·gan·shire (glə môr/gən shir/ -shər) *n.* a county in SE Wales. 1,155,000 pop. (est. 1946); 816 sq. mi. *Co. seat:* Cardiff. Also, **Gla·mor/gan.**

glare[1] (glâr) *n.*, *v.*, glared, glaring. —*n.* 1 a strong, dazzling light; brilliant luster. 2 dazzling or showy appearance; showiness. 3. a fierce or piercing look. —*v.i.* 4. to shine with a strong, dazzling light. 5. to be too brilliantly ornamented. 6. to be intensely bright in color. 7. to be conspicuous. 8. to look with a fierce or piercing stare. —*v.t.* 9. to express with a glare. [ME *glaren*, c. MD and MLG *glaren*; akin to GLASS (cf. OE *glæren* glassy)]

—**Syn.** 4. See shine. 8. GLARE, GLOWER, GLOAT all have connotations of emotion which accompany an intense gaze. To GLARE is to look piercingly or angrily: *a tiger glares at its victims.* To GLOWER is to look fiercely and threateningly, as from wrath; it suggests a scowl along with a glare: *to glower at a persistently mischievous child.* To GLOAT meant originally to look with exultation, avaricious or malignant, on something or someone: *a tyrant gloating over the helplessness of his victim.* Today however it may imply simply inner exultation.

glare[2] (glâr) *n.* 1. a bright, smooth surface, as of ice. —*adj.* 2. bright and smooth; glassy: *glare ice.* [special uses of GLARE]

G-man (jē/măn/) *n.* an agent for the FBI.

gnome[1] (nōm) *n.* one of a species of diminutive beings fabled to inhabit the interior of the earth and to act as guardians of its treasures, usually thought of as shriveled little old men; a troll. [t. F, t. NL (Paracelsus)] —**gnom/ish**, *adj.* —**Syn.** See goblin, sylph.

gnome[2] (nōm) *n.* a short, pithy expression of a general truth; aphorism. [t. Gk.: judgment, opinion, maxim]

gno·mic (nō/mĭk, nŏm/ĭk) *adj.* 1 like or containing gnomes or aphorisms. 2. of, pertaining to, or denoting a writer of aphorisms, esp. certain Greek poets. Also, **gno/mi·cal.** [t. Gk. *gnōmikós*] —**gno/mi·cal·ly**, *adv.*

go (gō), *v.*, went, gone, going, *n.*, *pl.* goes. —*v.i.* 1 to move or pass along; proceed. 2. to move away or out; depart (opposed to *come* or *arrive*). 3 to keep or be in motion; act, work, or run. 4 to become; assume another state or condition: *to go mad.* 5 to continue; be habitu- [illegible]

awarded, transferred, or applied to a particular recipient or purpose. 11 to be sold: *the property went for a song.* 12. to conduce or tend: *this only goes to prove the point.* 13 to turn out; result: *how did the game go?* 14. to belong; have a place: *this book goes on the top shelf.* 15. (of colors, etc.) to harmonize; be compatible; be suited. 16 to act or operate with sound, as a bell or a gun; make a certain sound: *the gun goes bang.* 17 to be discharged or exploded (fol. by *off*). 18. to be phrased: *how does the verse go?* 19. to resort; have recourse: *to go to court.* 20 to get the facts; find out (fol. by *behind*). 21 to be given up; be worn-out; be lost or ended. 22. to die. 23 to fail; give way. 24. to be overwhelmed; be ruined (fol. by *under*). 25. to begin; come into action: *here goes!* 26. to attack (fol. by *at*). 27 to be contained (fol. by *into*): *4 goes into 12.* 28 to contribute in amount or quantity; be requisite: *16 ounces go to the pound.* 29 to share equally (fol. by a complementary substantive): *to go partners.* 30 to contribute to a result: *the items which go to make up a total.* 31 to be about, intending, or destined (used in the pres. part. fol. by an infinitive): *he is going to write.* 32. *Naut.* to change course by tacking or wearing (fol. by *about*). —*v.t.* 33. *Colloq.* to endure or tolerate: *I can't go his preaching.* 34 *Colloq.* to risk or wager. 35 Some special verb phrases are:

go around, 1 to move about; circulate. 2. to be enough for all.

go back on, *Colloq.* 1 to fail (someone); let (someone) down. 2. to fail to keep (one's word, promise, etc.)

go by 1 to pass. 2. to be guided by.

go down, 1. to descend; slope down. 2. to be defeated. 3. *Brit.* to leave the University at the end of the term or permanently (according to context).

go in for to make (a thing) one's particular interest.

go on, 1. to go ahead; proceed. 2. to manage; do. 3 to behave; act. 4. to begin to operate.

go out, 1 to come to a stop; end: *the light went out.* 2. to go to social affairs, etc.

go over, 1. to read or reread. 2. to repeat. 3. to look at, examine.

go through with to complete; bring to a finish.

go up, 1 to rise or ascend; advance. 2. *Brit.* to go to the University at the beginning of term.

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—*n.* 36. act of going: *the come and go of the seasons.* 37 *Colloq.* energy, spirit, or animation: *to be full of go.* 38 *Eng.* the first or preliminary examination at Cambridge University for the degree of A.B. 39. *Colloq.* a try at something; attempt: *to have a go at something.* 40. *Colloq.* something that goes well; a success: *to make a go of something.* 41 *Colloq.* a bargain: *it's a go!* 42. **on the go**, *Colloq.* constantly going; very active. [ME *go(n)*, OE *gān*; akin to D *gaan*, MLG *gān*, OHG *gān*, *gēn*, G *gehen*. Cf. GANG[1] *v.*] —**go/er**, *n.* —**Syn.** 1. walk, run, ride, travel, advance. —**Ant.** 1 stay.

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[illegible] dialectal; der., derived from; f., formed from; g., going back to [illegible]

Vocabulary Entry
Run-on Entry
Syllabication Dots
Consecutive Definition Numbers
Synonym Study
Hyphenated Entry
Homograph Numbers
Pronunciation
Alternative Entry
Principal Parts, etc.
Part of Speech
Example Contexts
Usage Notes
Short Pronunciation Key
Subject Label
Usage Label
Geographic Label
Idiomatic Entries
Synonyms
Antonyms
Abbreviation
Place Name
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Suffix
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Etymology
Foreign-word Label
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b. He is paralyzed.

8. Have you a *nostrum* for anxiety?
   a. Can you explain why men become anxious?
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9. The editor gave Dora's manuscript a *cursory* reading.
   a. He examined it thoroughly.
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    a. You cannot trespass on my land.
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II. To which of the following statements would you reply:

1. He is in his *dotage*.
2. He has a *mordant* wit.
3. Such *fustian*!
4. Spare me your *homiletics*.
5. You are a *quidnunc*.

a. I enjoy hearing and retelling the latest gossip.
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e. I tell you that smoking, drinking and television will lead you to physical and mental degeneration.

III. From the list below choose the word most appropriate for each of the blank spaces.

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5. A central tenet of democracy is separation of the ecclesiastical or spiritual authority from the ——— or civil.

[illegible]	*remorse*
assuage	*avatar*
corporeal	*dormant*
myriad	*exculpated*
temporal	*sacerdotal*

IV. To which of these women might the following adjectives be applied: *eclectic, fecund, lethargic, picayune, vacuous*

1. She dislikes anything involving physical activity.
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V. Choose the words in parentheses that best explain the italicized word.

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Martin, M and L Gelber *Dictionary of American History*, Philosophical Library, 1952

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Baughman, H E., *Aviation Dictionary and Reference Guide*, Aero 1942.

Harriman, Philip L., *Dictionary of Psychology*, Philosophical Library, 1947

Warren, Howard S., ed., *Dictionary of Psychology*, Houghton, Mifflin, 1934

Baldwin, J M. *Dictionary of Philosophy and Psychology* 3 vols., Macmillan, 1928

Dorland, W A., and E. C. L. Miller *American Illustrated Medical Dictionary*, Saunders, 1934

Newmark, Maxim, *Dictionary of Science and Technology in English, French, German, Spanish*, Philosophical Library 1943

6 **Biographical Dictionaries.** The outstanding biographical dictionary of American personalities no longer living is the *Dictionary of American Biography* (*DAB*), 20 vols., Scribners, 1928–1944 The *DAB* contains detailed accounts of the people discussed and usually provides a selected bibliography for further reading

Webster's Biographical Dictionary, G and C Merriam, 1943, lists 40,000 prominent men and women, living and dead, giving pronunciation and concise biographical data.

For British biography, you should consult the monumental *Dictionary of National Biography* (*DNB*), 63 vols., Oxford University Press, 1885–1938

SUMMARY

1 Own and use a **modern** abridged dictionary, avoid outdated, unauthentic dictionaries.
2 Learn the techniques employed by the editors of your dictionary
3 Consult **unabridged** and **specialized** dictionaries for information noted only briefly (or not at all) in abridged dictionaries.

Mastery Test Number 20

The average score among college students who have taken this test. 36 out of a possible 50. How does your score compare?

I. One statement in each of the following pairs explains the meaning of the italicized word. Mark that statement *True*

1 Professor Jones *lowred* at his class.
   a. He frowned at them.
   b He smiled at them.
2 Eric has a fine collection of *incunabula*.
   a. He owns several infant's cradles.
   b. He owns books printed before A.D. 1500.
3 Tom took the icon *gingerly* from Bill's hands.
   a. He wrested it.
   b. He held it most delicately and carefully
4 Sylvia's husband is *taciturn*.
   a. He rarely speaks.
   b. He is garrulous.
5 Ken has a *mellifluous* voice.
   a. His tones seem honeyed and smooth.
   b His nasality grates my nerves.
6. Hotchkiss is a *hypochondriac*
   a. His ailments are more psychic than somatic.
   b His ailments are more somatic than psychic.
7 Loomis suffers from *paresis*.
   a. He is a drunkard.

b. He is paralyzed.

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   a. Can you explain why men become anxious?
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Harriman, Philip L., *Dictionary of Psychology*, Philosophical Library 1947

Warren, Howard S., ed., *Dictionary of Psychology*, Houghton, Mifflin, 1934

Baldwin, J M., *Dictionary of Philosophy and Psychology*, 3 vols., Macmillan, 1928

Dorland, W A., and E. C. L. Miller *American Illustrated Medical Dictionary*, Saunders, 1934

Newmark, Maxim, *Dictionary of Science and Technology in English French, German, Spanish*, Philosophical Library 1943

6 **Biographical Dictionaries.** The outstanding biographical dictionary of American personalities no longer living is the *Dictionary of American Biography* (*DAB*), 20 vols., Scribners, 1928–1944 The *DAB* contains detailed accounts of the people discussed and usually provides a selected bibliography for further reading

Webster's Biographical Dictionary, G. and C Merriam, 1943, lists 40,000 prominent men and women, living and dead, giving pronunciation and concise biographical data.

For British biography, you should consult the monumental *Dictionary of National Biography* (*DNB*), 63 vols., Oxford University Press, 1885–1938

SUMMARY

1 Own and use a **modern** abridged dictionary, avoid outdated, inauthentic dictionaries

2 Learn the techniques employed by the editors of your dictionary

3 Consult **unabridged** and **specialized** dictionaries for information noted only briefly (or not at all) in abridged dictionaries.

Mastery Test Number 20

The average score among college students who have taken this test 36 out of a possible 50. How does *your* score compare?

I. One statement in each of the following pairs explains the meaning of the italicized word. Mark that statement *True*

1 Professor Jones *lowered* at his class.
 a. He frowned at them.
 b He smiled at them.

2 Eric has a fine collection of *incunabula*
 a. He owns several infant's cradles.
 b He owns books printed before A.D. 1500.

3 Tom took the icon *gingerly* from Bill's hands.
 a. He wrested it.
 b He held it most delicately and carefully

4 Sylvia's husband is *taciturn*.
 a. He rarely speaks.
 b. He is garrulous.

5 Ken has a *mellifluous* voice.
 a. His tones seem honeyed and smooth.
 b. His nasality grates my nerves.

6. Hotchkiss is a *hypochondriac*
 a. His ailments are more psychic than somatic.
 b. His ailments are more somatic than psychic.

7 Loomis suffers from *paresis*
 a. He is a drunkard.

FINAL REVIEW TEST OF CORE LIST WORDS

The Final Review Test follows. It consists of 100 words selected from among the 500 core-list words you have studied after Chapter Ten. If you know 85 or more words of the hundred, you are doing extremely well—better than most college graduates, in fact. If you know 75 or more, you have made satisfactory progress, but you ought to review those words you have not yet mastered. If you know fewer than 75 words, continue to study the words on each core list until you have made them wholly yours.

1. acrimonious a. sharp-tempered b. skillful c. hypocritical
2. affluent a. rich b. poor c. happy
3. amorphous a. without solidity b. without shape c. without love
4. assuage a. to persuade b. to increase c. to ease
5. benedict a. French liqueur b. to bless c. newly married man
6. bona fide a. credentials b. faithful friend c. in good faith
7. bowdlerize a. to disembowel b. to expurgate c. to jest obscenely
8. calumny a. slander b. praise c. criticism
9. cavil a. polite b. to cut c. to fault find
10. chimera a. a dark box b. a looking-glass c. an illusion
11. contrite a. pitiful b. penitent c. humble
12. crestfallen a. dead b. defeated c. dejected
13. cursory a. hasty b. swearing c. deprecatory
14. decorum a. propriety b. behavior c. impropriety
15. detergent a. cleansing b. hesitating c. preventing
16. didactic a. funeral b. religious c. instructive
17. dilatory a. distended b. delaying c. narrow
18. discrete a. separate b. cautious c. silent
19. disingenuous a. frankness b. stupidity c. lacking frankness
20. duplicity a. ambidextrous b. politic c. deceitfulness
21. ebullient a. sad b. happy c. overflowing
22. eclectic a. selective b. superficial c. secret
23. egregious a. outstanding for excellence b. outstanding in a bad way c. retiring.
24. emulous a. ambitious to equal another b. imitative c. swollen
25. enhance a. to raise b. to decrease c. to endanger
26. epicure a. glutton b. sensualist c. philosopher
27. equanimity a. good-temperedness b. balance c. self-possession
28. excoriate a. to expel b. to flay c. to cleanse thoroughly
29. fecund a. fraudulent b. nutty c. fruitful
30. fetid a. hot b. fevered c. stinking
31. fetish a. an object irrationally revered b. a mania c. a compulsive act or tendency
32. fulsome a. replete b. offensive c. foul-smelling
33. fortuitous a. lucky b. happy c. accidental
34. furtive a. secret b. shrinking c. fur-bearing
35. germane a. ancestor b. pertinent c. Teutonic
36. gingerly a. sharply b. warily c. sweetly
37. glabrous a. hairless b. sticky c. oral
38. gratuitous a. causeless b. grateful c. remarkable
39. gregarious a. independent b. fearful c. sociable
40. haggle a. wrangle b. a crone c. hopeful
41. hypothetical a. false b. supposed c. dubious
42. ignominy a. humbleness b. stupidity c. disgrace
43. immanent a. immovable b. indwelling c. likely to happen at any moment
44. immolate a. to mimic b. to sacrifice c. to transfix
45. inane a. psychotic b. silly c. innocent
46. inchoate a. confused b. rudimentary c. unclear
47. incisive a. unsure b. dull c. sharp
48. indigent a. idle b. penniless c. lazy
49. intransigent a. stationary b. uncompromising c. careless
50. invidious a. exciting ill-will b. unseen c. easy to perceive
51. jejune a. barren b. very young c. a lozenge
52. jeremiad a. a long trip b. a long yarn c. a lamentation
53. levity a. laughter b. lightness c. inappropriate behavior
54. littoral a. accurate b. religious rites c. shore
55. loquacious a. happy b. talkative c. melancholy

b. He belongs to the party in power
c. He favors rule by the few, not by the many

3 Which is *unconscionable?*
a. It is both outrageous and beyond reason.
b. It is dull.
c. It is an act of conscience.

4 Which man has a *rationale?*
a. He has sores all over his body
b. He has an answer for everything
c. He comprehends and can clearly explain his principles.

5 Which man is *execrable?*
a. He is a benign fellow
b He is an abominable fellow
c. He is a trustworthy fellow

6 Which tale is *lurid?*
a. It narrates the idyllic love of Philemon and Baucis.
b It narrates the amorous escapades of a romantic knight.
c. It narrates a sordid affair between a prostitute and a soldier and reaches its climax in death and disease.

7 Which can be studied as an *ethnic* group?
a. Whales.
b. Polynesians.
c. Caterpillars.

8 Which man is *docile?*
a. He is amenable to teaching
b He is rather dull.
c. He is kind and sweet.

9 Which man is *propitiatory?*
a. He tries to keep the good will of all people.
b. He owns considerable property
c. He complains bitterly and persistently

10. Which man has *perused* a book?
a. He has stolen it from the library
b He has skimmed it cursorily
c. He has read it carefully and thoughtfully

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56 lugubrious a. doleful b weighty c. thick-witted
57 malignity a. seriousness b long-enduring c. wickedness
58 masochist a. one who enjoys pain and suffering b one who enjoys inflicting pain c. a Peeping Tom.
59 mellifluous a. flowering b. smooth-flowing c. sweet
60 mercenary a. grasping b generous c. pugnacious
61 mercurial a. changeable b soaring c. spirited
62 mnemonic a. assisting memory b a device c. an appointment book or diary
63 moot a. a court b to fight c. debatable
64 mundane a. worldly b heavenly c. daily
65 nebulous a. universal b lowering c. hazy
66. noxious a. pertaining to the night b poisonous c. harmful
67 officious a. obtrusively helpful b bureaucratic c. legally sanctioned
68 opprobrium a. war b. hatefulness c. infamy
69 pensive a. meditative b jailed c. filled
70. periphery a. circle b. boundary c. beyond reasonable limits
71 pettifogger a. a shifty person b a lawyer c. a meteorologist
72 picayune a. insignificant b an edible nut c. of or pertaining to Louisiana
73 piquant a. nutty b tart c. cruel
74 posthumous a. harvest time b undersoil c. after death
75 pragmatic a. scientific b. unphilosophical c. practical
76. proselyte a. convert b fiction writer c. essayist
77 quixotic a. rapid b. chivalrous c. nebulous
78 quondam a. grandmother b. curse c. former
79 raucous a. rioting b strident c. uncooked
80. redundant a. excessive b. overwhelming c. succinct
81 restive a. comfortable b uneasy c. relaxed
82 sardonic a penetrating b. sarcastic c. fishy
83 secular a. religious b. dry c. worldly
84 sporadic a. occasional b frequent c. mild
85 spurious a. counterfeit b. goaded c. hateful
86. stoic a. philosophical b impressive c. birdlike
87 supine a. lying face forward b. lying face upward c. prone
88 sycophant a. servile flatterer b leader c. false friend
89 taciturn a. silent b. malicious c. preserving
90 tirade a. despot b automobile advertisement c. denunciation
91 torpid a. missile b. cloudy c. sluggish
92 turbid a. transparent b. muddy c. sluggish
93 unconscionable a. very long b. cruel c. unscrupulous
94 undulate a. to move in waves b. to sail c. to move jerkily
95 utilitarian a. lacking purpose b ugly c. useful
96. vagary a. cloudy b. capricious notion or action c. one who has no set goals
97 valid a. costly b well-founded c. false
98 vehement a. without force b. illogical c. impassioned
99 wanton a. demanding b. motiveless c. unbridled
100 wary a. cautious b enduring c. tiresome

You will want to calculate your improvement. In order to make the calculation, you will need to know the size of your vocabulary before and after studying this book.

Here, then, is how to form an approximation of your vocabulary now:

1. You will need a fairly comprehensive abridged dictionary, one that embraces about 150,000 words. (*Webster's New Collegiate Dictionary*, published by G. & C. Merriam Co., or *The American College Dictionary*, published by Harper & Brothers, will meet your need fully.)

2. Count the number of words whose meaning you know on the page following each successive letter of the alphabet. (Thus if the *a*'s begin on page 1, you will count the number of words with which you are familiar on page 2; if the *b*'s begin on page 63, you will count the number of words with which you are familiar on page 64; if the *c*'s begin on page 115, you will count the number of words with which you are familiar on page 116; and so on, till the end of the alphabet. You may omit the *x*'s: too few words begin with *x* (and most of them are too special) to matter for our purpose.

3. Look at the number of pages of definitions in your dictionary. Suppose there are 1,000 pages of definitions. You have recorded the number of words that you recognized on twenty-five pages—or one-fortieth of the total number of pages. Let us say that on the twenty-five pages examined, you knew a total of 500 words. Multiply 500 by 40. The result, 20,000 words—the number of words you recognize.

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biology The science of living things.
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carbohydrate Any organic compound (starch, sugar, cellulose) containing carbon, hydrogen, and oxygen.
chlorophyll The green substance which colors plants and which manufactures food from carbon dioxide and water in the presence of sunlight.
chromosome A microscopic body that contains the genes.
cytology The branch of biology that studies plant and animal cells.
embryology: The branch of biology that studies the development of specific animals or plants.
ganglia The nerve cells which emit nerve impulses.
genes The element in a germ cell that determines the hereditary traits of all living things.
genetics The branch of biology that studies heredity and variety in plants and animals.
histology The branch of biology that studies plant and animal tissues.
protein An organic compound, common to all animal and vegetable matter containing carbon, hydrogen, nitrogen, oxygen, and sulphur.
protozoa: A microscopic, one-celled animal; the lowest entity in the animal kingdom.
zoology: The branch of biology which studies animal life.

Representative Sentences

1. Forty-eight *chromosomes*—twenty-four from each parent—comprise the basic physical inheritance of the newly fertilized human egg. Within the chromosomes are the *genes* the final arbiters of our heredity. Although no microscope has yet been able to show them clearly *geneticists* know that these genes live and determine the physical traits of each of us.
2. The *protozoa*, *cytologists* observe, although the simplest among animals, nevertheless performs all processes needful for every kind of animal life.
3. Botanists doubt that *chlorophyll* eliminates odors they are certain that if it is exposed to sunlight, it converts carbon dioxide and water into *carbohydrates*.

DANCE

arabesque: A ballet position in which the dancer stands upon one leg and extends the other rearward one arm is thrust forward, the other rearward, pointing toward the extended toe.
ballet An esthetic union of dance, pantomime, and music.
balletomane An enthusiast of the ballet.
choreography: The arrangement of steps and movements for a dance, especially applied to ballet arrangements.
entrechat A vertical leap or jump in which the dancer crosses his legs or heels rapidly and often before landing.
pas de bourrée A series of short, rapid, and evenly paced steps suggesting gliding or floating.
pas de deux A dance composed for two performers.
pirouette Whirling on the toes of one foot.
sur les pointes Dancing on the tips of the toes ("toe-dancing")
tutu: The short skirt worn by ballet dancers.

Representative Sentences

1. The *balletomane* passionately attends to *choreography* and the technical niceties of the *arabesque entrechat*, and *pas de bourrée*.

GOVERNMENT

civil rights The freedom guaranteed an individual by the laws of his nation, such as freedom of speech, religious belief press, and assembly.
constitutional monarchy A government in which the king (monarch) has limited power under a system of laws established by the people.
divine right The allegedly God-given privilege by which monarchs once ruled.
due process of law: One of the safeguards of civil rights provided by the Fourteenth Amendment. It assures any accused person a fair trial in which the prosecuting agency must be authorized by law and the accused given the right to be heard in his own defense.
imperialism The practice by which a nation seeks to expand its political and economic power by annexing colonies.
nationalism: The belief that the personal interests of one nation are more important than those of the community of nations.
quid pro quo From the Latin, "something for something." A bargaining method sometimes used by governmental officials and agencies.
totalitarianism A system of government in which one person or party assumes and exercises complete control, allowing no minority dissent.

Representative Sentences

1. The Glorious Revolution against James II established the supremacy of the English Parliament

Special Vocabularies

We have made brief selection of words having general currency in the arts, sciences, and social studies, together with illustrative sentences. Our lists are severely abridged they are intended to be suggestive rather than comprehensive

ANTHROPOLOGY

acculturation The gradual process of cultural change produced in a society that absorbs the traits of a different social group

anthropology The study of the cultural development of groups of men by examining their customs, beliefs and behavior

archaeology The study of the cultural life of prehistoric or extinct groups of people.

caste system A rigid system of class distinction.

cephalic index The ratio of the breadth of the human skull to its length (an anthropological measure used to differentiate races and types of men)

genocide Planned extermination of any racial or national group

taboo A forbidden practice or object, one set apart as sacred or for some like reason.

totem The plant or animal that a primitive clan or family regards as having a blood relationship to it.

Representative Sentences

1 The Americanization of immigrants illustrates the process of *acculturation*

2 Because the *cephalic index* is nearly the same on the living head as on the dead skull, anthropologists can compare present and past generations of types of men.

3 The Brahmin Hindu assumes superiority over those of lower *caste* whom he considers "untouchables."

4 *Genocide*—the mass murder of an *ethnic* group—is one of the things the Allies tried to stamp out by suppressing Nazism.

5 The family coat-of arms may represent a *totem* as definitely as does the Indian "totem pole."

ARCHITECTURE

baroque An ornate architectural style stressing contorted rather than straight lines and indulging in flamboyant decoration.

basilica A Roman building used either as a hall of justice or as a commercial exchange. Similar in design to Greek temples, the basilica is rectangular in shape and divided into aisles by rows of columns. A raised platform (*tribune*) at one end overlooks the hall.

Gothic A medieval architectural style used chiefly in cathedrals and characterized by pointed arches, flying buttresses (supports) tall pinnacles, delicately slender spires, and a rectangular floor plan.

Romanesque A heavy monumental architectural style evolved from Byzantine and prevalent in Europe between the 9th and 12th centuries, especially in cathedrals, castles, and monasteries. Romanesque architecture is characterized by rounded, massive arches, thick walls and buttresses, timber roofs (often domed), and a square floor plan.

ziggurat An ancient tower built in the form of terraces gradually receding from an enormous base.

Representative Sentences

1 The towering spire of the *Gothic* cathedral symbolizes man's spiritual aspirations.

2 The flamboyance of *baroque* architecture seems often the product of ingenuity rather than taste.

3 The semi-darkness of a *Romanesque* abbey reflects the austerity of the monastic spirit.

4 New York's deeply terraced modern office buildings recall Babylonia's *ziggurats*.

ART

abstract art A painting or sculpture that expresses the quality of physical objects without photographic realism or representational form.

ceramics The art of making products of clay and other earth materials.

chiaroscuro The distribution of light and dark in a painting

cubism Painting characterized by geometrically ordered structure and usually by monochromatic color Cubists who use bold color are called *Orphists*

dadaism A movement in art and literature that sought to destroy traditional attitudes by advocating a confusion of forms. Dada began in France after World War I and lasted for about seven years. "Dada tended toward novelty by a natural movement but denied itself any formal novelty" (Tristan Tzara)

futurism A form of cubism that glorifies the machine; the artist paints geometric forms as an abstraction of dynamic force and movement.

gouache A technique of painting with opaque water colors.

impressionism. A school of painting developed in France during the nineteenth century by Manet, Monet, Pissaro, and Degas, which attempts to communicate the artist's immediate sense impression of his subject (especially as it is modified by light) regardless of its physical details or of its permanent form and color

non-objective art Painting or sculpture of objects having no counterpart in the physical world.

surrealism Painting influenced by psychoanalysis; it attempts to represent the irrational images and fantasies of the unconscious mind

Representative Sentences

1 "The entire method of *impressionism* evokes the feeling that all experience is a wave gliding away on the river of time, that reality is not a being but

a becoming, not a condition, but a process." (adapted, Arnold Hauser *Social History of Art*)

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balletomane: An enthusiast of the ballet.

choreography The arrangement of steps and movements for a dance, especially applied to ballet arrangements.

entrechat A vertical leap or jump in which the dancer crosses his legs or heels rapidly and often before landing.

pas de bourée A series of short, rapid, and evenly paced steps suggesting gliding or floating

pas de deux: A dance composed for two performers.

pirouette: Whirling on the toes of one foot.

sur les pointes Dancing on the tips of the toes ("toe-dancing")

tutu The short skirt worn by ballet dancers.

Representative Sentences

1. The *balletomane* passionately attends to *choreography* and the technical niceties of the *arabesque*, *entrechat*, and *pas de bourée*

GOVERNMENT

civil rights The freedom guaranteed an individual by the laws of his nation, such as freedom of speech, religious belief press, and assembly

constitutional monarchy: A government in which the king (monarch) has limited power under a system of laws established by the people.

divine right The allegedly God-given privilege by which monarchs once ruled.

due process of law One of the safeguards of civil rights provided by the Fourteenth Amendment. It assures any accused person a fair trial in which the prosecuting agency must be authorized by law and the accused given the right to be heard in his own defense.

imperialism The practice by which a nation seeks to expand its political and economic power by annexing countries.

nationalism The belief that the personal interests of one nation are more important than those of the community of nations.

quid pro quo From the Latin, "something for something." A bargaining method sometimes used by governmental officials and agencies.

totalitarianism A system of government in which one person or party assumes and exercises complete control, allowing no minority dissent.

Representative Sentences

1. The *Glorious Revolution* against James II established the supremacy of the English Parliament

and laid the foundations for the development of *constitutional monarchy*

2 Constitutional discussions about *civil rights* usually concern the legal privileges of Negroes rather than broader liberties known as "natural law"

3 During the past fifty years, judicial decisions involving the "*due process*" clause of the Fourteenth Amendment have frequently stressed the protection of property rights more than those of personal liberty. Only recently has attention reverted to the latter

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HISTORY

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Hellenism The cultural pattern of classical Greece. "The governing idea of Hellenism is spontaneity of consciousness: that of Hebraism, strictness of conscience." (Matthew Arnold, *Culture and Anarchy*)

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Renaissance Generally any period during which the arts flourish. More specifically, the name given to the revival of learning and the flourishing of art in Italy and Western Europe between 1400 and 1600.

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3 "For over 100 years . . . the *Byzantine* Empire was the center of a civilization equal to that of any age in brilliancy . . . The center of refinement and the home of a great movement in thought and art." (Charles Diehl, *Cambridge Medieval History*)

4 The true *humanist*, like Erasmus, is neither cynical nor flippant; but he is often ironic and witty in defending individualism against authoritarianism.

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LITERATURE

classicism Primarily the style characterized by its adherence to formal values, to unity of purpose and design. It aims at reason and emotional restraint, at simplicity, balance, clarity (Representative Works: Sophocles *Oedipus the King*, Horace's *Art of Poetry*)

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romanticism Primarily the style characterized by its emphasis on individuality and originality It

ents imagination (rather than reason) emotion (rather than restraint) formal freedom (rather than traditional forms) ranging suggestiveness (rather than concentration, simplicity and clarity). (Examples: Byron's *Childe Harold* Kingsley's *Westward Ho!*)

satire A form of literary composition that employs either parody sarcasm, wit, invective (any one or any combination) to ridicule the follies of mankind or denounce its vices.

tragedy: A dramatic work in which a character or characters come to an unhappy end through the instrumentality of a malign fate, personality flaws, social pressures, or the like.

verse Traditionally a patterned arrangement of syllables.

(a) Blank verse: unrimed verse, regularly consisting of ten syllables to a line, the accents falling on the even-numbered syllables. (Examples: Milton's *Paradise Lost*, Wordsworth's *Michael*.)

(b) Free verse (or *vers libre*): verse with no fixed metrical pattern, no set alternation of stressed and unstressed syllables. Its rhythmic effect depends not so much on the individual line as on the cumulative sweep of a group of lines. (Examples: Eliot's *The Waste Land*, Pound's *Cantos*)

Representative Sentences

1. *Classicism* and *Romanticism* "are the centripetal and centrifugal forces of creative literature: the classical impulse is towards echoing the poetry of the past, ministering to an established sense of form, recalling details already dear to the imagination in ever new kaleidoscopic variations, the Romantic impulse is towards novelty, free invention and surprise." (R. G. Moulton)
2. "When we compare Sheridan's play (*The School for Scandal, a comedy of manners*) with that of Plautus (*The Twin Menaechmi, a farce*) certain obvious differences emerge: Plautus keeps our attention focused on the confusion and hurly-burly whereas Sheridan focuses our attention on character." (Cleanth Brooks and Robert Heilman)
3. "The *Iliad* and the *Odyssey* are heroic *epics*. They celebrate the great deeds of a generation which has passed from the earth and did what later men could not do. Their values are those of an age which judges everything by the standards of the heroic man who is equally notable in council and in war." (C. M. Bowra)
4. "The criteria of *naturalism* are: 1. Objectivity; 2. Frankness; 3. An amoral attitude toward material; 4. A philosophy of determinism; 5. A bias toward pessimism in selecting details." (Abridged from Vernon L. Parrington)
5. "*Novella* originally designated, in Italy, short tales such as those by Boccaccio, and first made its way into English when the Italian tale found favor with masters like Chaucer." (Philo Buck)
6. " . . . the new vagabond of the social problem became the hero of the *picaresque* novel, the Spanish name for a rogue being *picaro*." (Philo Buck)
7. "*Realism* is as difficult to define as Romanticism. It was in part a reaction against the abuses of Romanticism—a protest against a literary point of view which was outmoded. Influenced by the development of science, the realists attempted to portray the typical, even if it was commonplace or ugly." (Jay B. Hubbell)
8. Romanticism. see *classicism*.
9. "*Satire* should, like a polished razor keen,
   Wound with a touch that's scarcely felt or seen."
   (*Lady Mary Wortley Montagu*)
10. "*Tragedy*, then, is the imitation of an action that is serious, complete, and of a certain magnitude . . . through pity and fear effecting the proper purgation of these emotions." (Aristotle)
11. Surrey imported *blank verse* from Italy to England in the sixteenth century. Later in the same century, Marlowe gave blank verse a new force and flexibility:

    "Was this the face that launched a thousand ships
    And burnt the topless towers of Ilium?"
    (Thomas Thirlwall)

    It has been humorously suggested that free verse

    "*Vers libre*
    Is anything
    At all,
    Arranged
    Like this."
    (Edward Anthony)

MEDICINE

antibiotics Substances capable of destroying or inhibiting the growth of bacteria.

antiseptic Any technique or substance which prevents infection by disease-producing organisms.

antitoxin A substance found in blood serum (the clear portion of blood) and used in injections to combat disease.

asepsis The state of freedom from disease-producing organisms.

cardiology The branch of medicine concerned with functions and diseases of the heart.

gynecology The branch of medicine concerned with the treatment of women's diseases.

hormone A chemical substance created by one bodily organ and ultimately affecting other organs or tissues.

obstetrics The branch of medicine concerned with the care of women during pregnancy and childbirth.

ophthalmology The branch of medicine concerned with functions and diseases of the eye.

orthopedics The branch of surgery concerned with treating diseases and injuries of the bones and joints.

pediatrics The branch of medicine concerned with the care and treatment of infants and children.

plasma: The fluid portion of blood.

preventive medicine The branch of medicine concerned with methods of prophylaxis (preventing disease).

vaccine A preparation of dead virus inoculated into the body to prevent a specific disease.

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virus Microscopic or ultramicroscopic organisms which infect and cause disease.

Representative Sentences

1 If man were *aseptic*, he would have little occasion (unless he were a hypochondriac) to use *vaccines*, *antibiotics*, or *antitoxins* In a world free of disease-producing organisms like the *virus*, *preventive medicine* would be of historic rather than practical interest.

2 Transfusions of *plasma* afford greater convenience than those of whole blood because blood cells (the source of difference in blood types) have been removed from plasma.

MUSIC

atonality The deliberate avoidance of regular keys and tones in musical composition.

chamber music Musical compositions written to be played by a small, intimate orchestra, usually a quartet or quintet, using violin, viola, and cello. Such music was originally composed for use in private homes and small auditoriums.

concerto A musical composition for a solo instrument or a small group of solo instruments accompanied by an orchestral background.

counterpoint The combination of related but different melodies to produce varied sound textures.

fugue A musical composition in which a theme is introduced by a single voice or instrument, then developed and varied by succeeding voices or instruments.

madrigal Choral music using secular themes (often love poetry), written for several voices and sung without accompaniment.

motet Choral music using sacred themes, written for several voices, and usually sung without musical accompaniment.

sonata A musical composition of three or four movements, usually played by a single instrument. (A *cantata* is sung by a choir)

symphony A musical composition of four movements, played by a full orchestra.

Representative Sentences

1 *Chamber music*—especially *sonatas* and *concertos*—appeals to sophisticated musical tastes that relish subtlety and complexity

2. In Schoenberg's *atonal* music, none of the twelve tones in the chromatic scale may be repeated until the remaining eleven have been sounded.

3 The concise symmetry of Bach's *counterpoint* made his *fugues* for harpsichord the supreme achievements in that genre.

4 "Beethoven's *Fifth Symphony* having established its theme with four introductory notes, follows an inexorable logic of thematic development throughout its four movements. The theme is never a motto' it is the quintessence and the summing up of the whole." (Adapted from Paul Henry Lang)

PHYSICS

alpha rays Streams of positively charged radioactive particles emerging from an atomic nucleus.

amplifier A device that increases the strength of voltage or current, thereby magnifying the signal produced.

beta rays Streams of radioactive electrons capable of nearly the speed of light.

cathode ray A thin stream of high-speed electrons enclosed in a vacuum tube. When beamed against a fluorescent screen, the rays show patterns of light, resulting in a television screen.

condenser A device for storing or smoothing out electric current.

cosmic rays A mixture of gamma rays and high-speed particles that enter the atmosphere from outer space.

current The flow of electrons through a circuit, resembling the passage of water through a pipe.

cyclotron A device used to break down nuclei by bombarding them with high-speed electrified particles.

electronics The branch of physics that studies the characteristics of electrons, the particles contained in all atoms. Studying the behavior of electrons has led scientists to develop television receivers, radar X-ray equipment and the like.

fidelity The faithfulness with which an amplifier reproduces the signal being magnified.

gamma rays Streams of radioactive electromagnetic waves capable of penetrating one foot thicknesses of metal.

nuclear fission The process of splitting a nucleus into two parts of comparable size. The enormous energy produced supplies the destructive power of atomic bombs.

nucleonics The branch of physics (also called *nuclear physics*) that studies the *nucleus*, innermost part of the atom.

quantum The measurable amount of energy released by the action of radiation.

radioactive Having the ability to emit particles from an atomic nucleus, as radium, uranium, thorium, etc.

resistor A device for reducing or slowing down electric pressure.

supersonic A speed exceeding 738 miles per hour the speed of sound *supersonic aircraft*.

Representative Sentences

1 "The most efficient way to send power is to keep the flow of electric *current* as low as possible, and make the *voltage* or electrical pressure of the line, as great as possible." (G R. Harrison, *Atoms in Action* adapted)

2 Scientists engaged in *nuclear fission* or "splitting the atom," are interested not only in using the energy created, but also in learning how to control the enormous force released.

3 Physicists recognize the potential danger of *radioactive gamma rays* but they know too that such rays may help cure many diseases now being traced by *radioactive isotopes*

4 A giant new *cyclotron* has been built and can produce atomic projectiles with energies exceeding a hundred million volts.

5 A sensitive *amplifier* improves the *fidelity* of recorded music.

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13 *Superego* see *Ego*
14 "When [a patient's feelings toward his doctor] are of interest, liking respect, admiration, hopefulness, friendliness, etc., the *transference* is positive. When these feelings are of dislike, fear boredom, hate, anger vexation, disappointment, etc., the *transference* is negative." (Maurice Nicoll)

SOCIOLOGY

assimilation The integration of cultural traits that eliminates differences in social behavior
culture " The habits, folkways, mores, customs, institutions, and constellations of symbolic and non-symbolic traits." (Lundberg Schrag Larsen, *Sociology*) This is but one among hundreds of sociological definitions of *culture*, all, however refer to patterns of living followed by man in communal society
culture complex A cluster of interrelated cultural traits unified by a single dominant trait.
culture lag The failure of one phase of group culture to keep pace with other phases.
primary group A group of individuals living together harmoniously, with mutual respect and affection.
secondary group A group of individuals whose association with one another is relatively impersonal and formal.
sociology The study of man's social behavior

Representative Sentences

1 Chauvinism is a *cultural complex* in fanatically nationalistic societies.
2. When the population increases but the number of schools decreases, a *culture lag* occurs in education.
3 The infantry squad, the fraternity, and the family exemplify *primary groups*
4 Subway riders and residents of apartment houses belong to *secondary groups*

Roots—Prefixes—Suffixes

The affixes listed (according to frequency of occurrence) in chapters three, four, five, and thereafter in postscripts to the odd-numbered chapters have been collected and regrouped in this Appendix. For your convenience, three categories—roots, prefixes, and suffixes—have been retained, and an alphabetical listing has been used. Note that relatively few examples of Current Words appear in the Appendix; fuller listings may be found in the chapter and postscript tables.

Roots

Root		*Current Words*
AG act	*Meaning:*	do, drive, act coagulate, agent transact, react
ANTHROP	*Meaning:*	man anthropoid, *misanthrope*
ARCH	*Meaning:*	rule, govern anarchy, oligarchy
ARCH	*Meaning:*	chief, leader archduke, archetype
ARCH	*Meaning:*	ancient, first archaic, archive
AUTO	*Meaning:*	self autocrat, autopsy
BIBL	*Meaning:*	book bibliophile, bibliography
BIO	*Meaning:*	life biology, biography
BITAN	*Meaning:*	bite bait, beetle
CAP cip cept	*Meaning:*	take, hold caprice, capacity municipal, anticipate deception, concept
CAPIT cip	*Meaning:*	head capital, decapitate precipitate, precipice
CED	*Meaning:*	go, yield accede, cede
CHRON	*Meaning:*	time anachronism, chronic
CIV	*Meaning:*	city, citizen civic, civilian
CORD	*Meaning:*	heart accord, cordial
COSM	*Meaning:*	universe, order, ornament cosmic, cosmopolitan
CRAT	*Meaning:*	power, strength autocrat, aristocrat
CUNNAN	*Meaning:*	know *cunning*, *keen*
DEM	*Meaning:*	people democrat, demagogue
EARG	*Meaning:*	cowardly, disgusting, lifeless irk, irksome
EU	*Meaning:*	happy, pleasing euphemism, eulogy
FAC fic fect	*Meaning:*	make, do factory, putrefaction benefice, pontifical disaffection, confection
FER	*Meaning:*	carry, bring, bear confer, fertile
FID	*Meaning:*	faith fidelity, infidel
FIN	*Meaning:*	end, limit finance, infinite
GEN	*Meaning:*	race, to produce generate, indigenous

Root	*Meaning*	Examples
GOD	good	gospel, goodwill
GRAD	go, take steps	degrade, retrograde
gress		transgress, digress
GRAPH	write	graphic, autograph
gram		grammar, diagram
HETERO	different	heterogeneous, heterodox
HOMO	the same	homogeneous, homonym
IDIO	peculiar, one's own	idiom, idiosyncrasy
LAEWEDE	lay, unlearned	layman, lewd
LEG	law, legal	legislate, legitimate
LOG	word, speech, science	logic, eulogy
MIT	send, throw	permit, omit
miss		missive, missile
mise		demise, surmise
MO	to set in motion	emote, mobilize
NEUR	nerve, tendon	neuralgia, neurotic
PATH	feeling, suffering	apathetic, pathos
PHIL	loving, friendly, kind	philosopher, bibliophile
PLIC	twine, fold, bend	complicate, implicate
POLI	city	cosmopolitan, metropolis
PON	put, place	propound
pos		dispose, impose
PORT	carry	transport, import
REG	rule, straighten, arrange	regimen, regal
rect		director, rectitude
rig		incorrigible
ress		redress, address
SCOP	see	microscope, episcopal
SEQU	follow	sequel, subsequent
secu		persecute, prosecute
SOPH	wise	sophisticate, theosophy
SPEC	look, see, appear	specie, specimen
spect		introspective, prospectus
spic		perspicacity, conspicuous
STA	stand	stanchion, stanza
stat		statute, static
sist		subsist, persist
STRU	build	construe, instrument
struc		structure, destructive
TELE	far	telepathy, television
TEN	hold	tenure, tenant
tent		content, detention
tin		incontinent, retinue
tain		appertain, maintain
TEND	stretch	attend, tendril
TOM	cut	atom, epitome
TORT	twist	tortuous, distort
TRACT	draw, drag	attraction, detract
VEN	come	venture, invent

Meaning: turn
VERT avert, vertical
vers adversary, aversion

Meaning: see
VID evident, provident
vis visible, revise

Meaning: call
VOC vocalize, advocate
vok evoke, convoke

Prefixes

Prefix	Current Words

Meaning: at, in, on, to
A- aground, afoot

Meaning: not, without
A- apathetic, agnostic
an- anarchy, anesthetic

Meaning: from, away from
AB- abnormal, abjure
a- avert, avoid
abs- absent

Meaning: to, toward
AD- adduce, adhere
a- avenue, ascribe
ac- accede, accrue
af- affect, affix
ag- aggregate, aggrandize
al- allude, allot
an- annex, announce
ap- appendage, applaud
ar- arraign, arrive
as- assemble, assign
at- attest, attendance

AMBI- *Meaning:* both
ambivalent, ambidextrous

AMPHI- *Meaning:* both, around, on both sides
amphibious, amphitheater

ANA *Meaning:* back, against, opposite, up
analogy, analysis

ANTE- *Meaning:* before
anteroom, antecedent

ANTI- *Meaning:* opposed, against
antichrist, antidote

APO- *Meaning:* away, off
apostle, apocryphal

Meaning: throughout, over
BE- bespeak, besiege

Meaning: good, well
BENE- benevolent, benign

Meaning: two
BI biped, bisect

Meaning: near, uncommon
BY by-word, bystander

Meaning: down, downward
CATA catacomb, catastrophe

Meaning: one hundred
CENT century, centenary
centi- centipede, centime

Meaning: around
CIRCUM circumlocution, circumvent

Meaning: together with
COM commodious, communal
con- conducive, congruent
col- collusion, colloquy
cor correlate, corrode
cog cogent, cognate
co- coefficient, coagulate

Meaning: against
CONTRA contravene, contradict

Meaning: from, down (negative meaning)
DE- delineate, devious

Meaning: ten
DECA decalog, decathlon
dec decade, *Decameron*

Meaning: ten
DECEM
dec- decasyllabic
decim- decimal, decimate

Meaning: through, between
DIA diametrical, diagonal

Meaning: from, away, apart (negative meaning)
DIS- dissonance, distort
di divert, diligent
dif diffuse, diffident

Meaning: two
DU- duodenal
duo- duet, duplicate
di diploma, dichotomy

GOD — *Meaning* good
gospel, goodwill

GRAD — *Meaning* go, take steps
degrade, retrograde
gress — transgress, digress

GRAPH — *Meaning* write
graphic, autograph
gram — grammar diagram

HETERO — *Meaning* different
heterogeneous, heterodox

HOMO — *Meaning* the same
homogeneous, homonym

IDIO — *Meaning* peculiar one's own
idiom, idiosyncrasy

LAEWEDE — *Meaning* lay unlearned
layman, lewd

LEG — *Meaning* law legal
legislate, legitimate

LOG — *Meaning* word, speech, science
logic, eulogy

MIT — *Meaning:* send, throw
permit, omit
miss — missive, missile
mise — demise, surmise

MO — *Meaning:* to set in motion
emote, mobilize

NEUR — *Meaning* nerve, tendon
neuralgia, neurotic

PATH — *Meaning* feeling suffering
apathetic, pathos

PHIL — *Meaning* loving friendly kind
philosopher, bibliophile

PLIC — *Meaning:* twine, fold, bend
complicate, implicate

POLI — *Meaning:* city
cosmopolitan, metropolis

PON — *Meaning:* put, place
propound
pos — dispose, impose

PORT — *Meaning* carry
transport, import

REG — *Meaning* rule, straighten, arrange
regimen, regal
rect — director rectitude
rig — incorrigible
ress — redress, address

SCOP — *Meaning* see
microscope, episcopal

SEQU — *Meaning:* follow
sequel, subsequent
secu — persecute, prosecute

SOPH — *Meaning:* wise
sophisticate, theosophy

SPEC — *Meaning* look, see, appear
specie, specimen
spect — introspective, prospectus
spic — perspicacity conspicuous

STA — *Meaning* stand
stanchion, stanza
stat — statute, static
sist — subsist, persist

STRU — *Meaning:* build
construe, instrument
struc — structure, destructive

TELE — *Meaning* far
telepathy television

TEN — *Meaning:* hold
tenure, tenant
tent — content, detention
tin — incontinent, retinue
tain — appertain, maintain

TEND — *Meaning* stretch
attend, tendril

TOM — *Meaning* cut
atom, epitome

TORT — *Meaning* twist
tortuous, distort

TRACT — *Meaning:* draw drag
attraction, detract

VEN — *Meaning* come
[illegible]

VERT
vers
Meaning: turn
avert, vertical
adversary, aversion

VID
vis
Meaning: see
evident, provident
visible, revise

VOC
vok
Meaning: call
vocalize, advocate
evoke, convoke

Prefixes

Prefix — *Current Words*

A
Meaning: at, in, on, to
aground, afoot

A
an-
Meaning: not, without
apathetic, agnostic
anarchy, anesthetic

AB-
a
abs-
Meaning: from, away from
abnormal, abjure
avert, avoid
absent

AD-
a
ac
af
ag
al
an
ap
ar
as
at
Meaning: to, toward
adduce, adhere
averse, ascribe
accede, accrue
affect, affix
aggregate, aggrandize
allude, allot
annex, announce
appendage, applaud
arraign, arrive
assemble, assign
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Meaning: both
ambivalent, ambidextrous

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Meaning: both, around, on both sides
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Meaning: throughout, over
bespeak, besiege

BENE-
Meaning: good, well
benevolent, benign

BI
Meaning: two
biped, bisect

BY
Meaning: near, uncommon
by word, bystander

CATA
Meaning: down, downward
catacomb, catastrophe

CENT
centi
Meaning: one hundred
century, centenary
centipede, centime

CIRCUM
Meaning: around
circumlocution, circumvent

COM
con-
col-
cor
cog
co-
Meaning: together with
commodious, communal
conducive, congruent
collusion, colloquy
correlate, corrode
cogent, cognate
coefficient, coagulate

CONTRA
Meaning: against
contravene, contradict

DE-
Meaning: from, down (negative meaning)
delineate, devious

DECA
dec
Meaning: ten
decalog, decathlon
decade, *Decameron*

DECEM
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decim-
Meaning: ten
decasyllabic
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Meaning: through, between
diametrical, diagonal

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Meaning: from, away, apart (negative meaning)
dissonance, distort
divert, diligent
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- POLI: cosmopolitan, metropolis

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- PON: propound
- pos: dispose, impose

PORT — *Meaning:* carry
- PORT: transport, import

REG — *Meaning:* rule, straighten, arrange
- REG: regimen, regal
- rect: director, rectitude
- rig: incorrigible
- ress: redress, address

SCOP — *Meaning:* see
- SCOP: microscope, episcopal

SEQU — *Meaning:* follow
- SEQU: sequel, subsequent
- secu: persecute, prosecute

SOPH — *Meaning:* wise
- SOPH: sophisticate, theosophy

SPEC — *Meaning:* look, see, appear
- SPEC: specie, specimen
- spect: introspective, prospectus
- spic: perspicacity, conspicuous

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- tin: incontinent, retinue
- tain: appertain, maintain

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- TEND: attend, tendril

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- TOM: atom, epitome

TORT — *Meaning:* twist
- TORT: tortuous, distort

TRACT — *Meaning:* draw, drag
- TRACT: attraction, detract

VEN — *Meaning:* come
- VEN: venture, invent

PARA — *Meaning:* beside
parallel, paradox

PENTA — *Meaning:* five
pentagon, pentathlon

PER- — *Meaning:* through, throughout
persist, permeate

PERI — *Meaning:* around
periphery, perimeter

POLY — *Meaning:* many
polyglot, polysyllabic

POST — *Meaning:* after
posterior, postprandial

PRE- — *Meaning:* before (in place or time)
precursor, precede

PRO- — *Meaning:* forward, in favor of
promulgate, provoke

PRO- — *Meaning:* before, forward
prolific, prologue

QUAD- — *Meaning:* four
quadrant, quadrangle
quadri-
quadrille, quadrilateral

QUIN- — *Meaning:* five
quinquereme
quint-
quintet, quintessence

RE- — *Meaning:* again, back
relapse, renegade

RETRO- — *Meaning:* back
retroactive, retrospect

SE- — *Meaning:* aside, apart
secret, secede

SEMI- — *Meaning:* half
semicircle, semifinal

SEPT — *Meaning:* seven
septem-
Septuagenarian, Septuagint
September

SEX — *Meaning:* six
sextet, sextant

SUB- — *Meaning:* under, beneath
submarine, submerge
suc- succumb, succinct
suf suffer, suffix
sug suggest
sup- supplant, supply
sus- suspend, sustain

SUPER — *Meaning:* over, above
superficial, superimpose
supra suprarenal, supraliminal

SYN — *Meaning:* with, together
synagogue, synthesis
sym symphony, symmetry
syl- syllogism, syllable

TETRA — *Meaning:* four
tetrarch, tetrameter

TRANS- — *Meaning:* across, over
transfer, transmit
tra traduce, traverse

TRI — *Meaning:* three
triplets, trivet

UN — *Meaning:* not
unethical, uninspired

UNDER — *Meaning:* below, less than
undertow, underrate

UNI — *Meaning:* one
unity, unique

WITH — *Meaning:* from, against
withstand, withdraw

Noun Suffixes

Suffix — *Current Words*

ACY — *Meaning:* state of, act of, quality of
celibacy, democracy

AN (concrete) — *Meaning:* one who does, is concerned with
partisan, barbarian
-ant participant, vagrant
-ent student

ANCE — *Meaning:* state of, act of, quality of
severance, resistance
-ence diligence, subsistence

ANCY — *Meaning:* state of, act of, quality of
buoyancy, hesitancy
-ency agency, emergency

EC-	*Meaning*	out of
ex		ecstasy appendectomy
		exodus, exegesis
EN	*Meaning*	in, on
		endemic, entomology
ENNEA	*Meaning*	nine
		ennead
EPI	*Meaning*	upon, beside
		epitaph, epitomize
ep		epoch, epode
eph		ephemeral
EQUI	*Meaning*	equal
		equivocate, equilibrium
EX	*Meaning*	out, from, away
		exigency, expatriate
e-		evoke, eliminate
ef		efficacious, effect
FORE-	*Meaning*	before, in front of
		forewarn, foremost
HECTO	*Meaning*	one hundred
		hectograph, hectometer
HEMI	*Meaning*	half
		hemisphere, hemiplegia
HEPT	*Meaning*	seven
		heptagon, hebdomadal
HEX	*Meaning*	six
		hexagon, hexapod
IN (used with verbs and nouns)	*Meaning*	in, into on
		intrude, inure
il-		illuminate, illiterate
im		import, imbibe
ir		irrigate, irradiate
IN (used with adjectives	*Meaning*	not
		infallible, informal
ig		ignoble, ignorant
il		illicit, illegal
im		immodest, improper
ir		irrational, irregular
INTER	*Meaning*	between
		international, interfere
INTRO-	*Meaning*	within, inside
		introvert, introspect
intra		intravenous, intramural
KILO-	*Meaning*	one thousand
		kilogram, kilowatt
MAL-	*Meaning*	bad, badly
		malefactor malevolent
MILI	*Meaning*	one thousand
		milliard, million
mille-		millennium, mile
MIS-	*Meaning*	error, defect, wrong badly
		mistake, miscreant
MONO-	*Meaning*	one
		monopoly, monogamy
MULTI	*Meaning*	many
		multitude, multiple
NEO-	*Meaning*	current
		neologism, neophyte
NIL-	*Meaning*	nothing
		nil
nihil-		nihilism annihilate
nullus-		nullify annul
NON	*Meaning*	not
		nonsense, noncomformist
NOVEM	*Meaning*	nine
		November, novena
nona		nonagon, nonagenarian
OB-	*Meaning*	toward, against
		obstacle, obstruct
oc		occult, occur
of		offend
op-		oppose
OCTA	*Meaning*	eight
		octagon, octavo
OCTO-	*Meaning*	eight
		octet, October
OFF	*Meaning*	from
		offside, offspring
OUT	*Meaning*	beyond, complete
		outdo outclass
OVER	*Meaning*	over beyond, above
		overalls, overwrought

Prefix	Meaning	Current Words
PARA	beside	parallel, paradox
PENTA	five	pentagon, pentathlon
PER-	through, throughout	persist, permeate
PERI-	around	periphery perimeter
POLY	many	polyglot, polysyllabic
POST	after	posterior, postprandial
PRE-	before (in place or time)	precursor precede
PRO-	forward, in favor of	promulgate, provoke
PRO-	before, forward	prolific, prologue
QUAD- quadri-	four	quadrant, quadrangle quadrille, quadrilateral
QUIN quint-	five	quinquereme quintet, quintessence
RE-	again, back	relapse, renegade
RETRO-	back	retroactive, retrospect
SE-	aside, apart	secret, secede
SEMI	half	semicircle, semifinal
SEPT septem-	seven	Septuagenarian, Septuagint September
SEX-	six	sextet, sextant
SUB- suc suf sug sup- sus-	under beneath	submarine, submerge succumb, succinct suffer suffix suggest supplant, supply suspend, sustain
SUPER supra-	over above	superficial, superimpose suprarenal, supraliminal
SYN sym syl-	with, together	synagogue synthesis symphony symmetry syllogism, syllable
TETRA	four	tetrarch, tetrameter
TRANS- tra	across, over	transfer transmit traduce, traverse
TRI	three	triplets, trivet
UN	not	unethical, uninspired
UNDER	below less than	undertow underrate
UNI	one	unity unique
WITH	from, against	withstand, withdraw

Noun Suffixes

Suffix	*Meaning*	*Current Words*
ACY	state of act of quality of	celibacy democracy
AN (concrete) -ant -ent	one who does, is concerned with	partisan, barbarian participant, vagrant student
ANCE -ence	state of act of quality of	severance, resistance diligence, subsistence
ANCY -ency	state of, act of quality of	buoyancy hesitancy agency emergency

Prefix	*Meaning*	Examples
EC-	out of	ecstasy, appendectomy
ex		exodus, exegesis
EN	in, on	endemic, entomology
ENNEA	nine	ennead
EPI	upon, beside	epitaph, epitomize
ep-		epoch, epode
eph		ephemeral
EQUI	equal	equivocate, equilibrium
EX	out, from, away	exigency, expatriate
e-		evoke, eliminate
ef		efficacious, effect
FORE-	before, in front of	forewarn, foremost
HECTO-	one hundred	hectograph, hectometer
HEMI	half	hemisphere, hemiplegia
HEPT-	seven	heptagon, hebdomadal
HEX	six	hexagon, hexapod
IN (used with verbs and nouns)	in, into, on	intrude, inure
il		illuminate, illiterate
im		import, imbibe
ir		irrigate, irradiate
IN (used with adjectives)	not	infallible, informal
ig		ignoble, ignorant
il-		illicit, illegal
im		immodest, improper
ir		irrational, irregular
INTER	between	international, interfere
INTRO-	within, inside	introvert, introspect
intra		intravenous, intramural
KILO-	one thousand	kilogram, kilowatt
MAL-	bad, badly	malefactor, malevolent
MILI	one thousand	milliard, million
mille-		millennium, mile
MIS-	error, defect, wrong, badly	mistake, miscreant
MONO-	one	monopoly, monogamy
MULTI	many	multitude, multiple
NEO-	current	neologism, neophyte
NIL-	nothing	nil
nihil-		nihilism, annihilate
nullus-		nullify, annul
NON	not	nonsense, nonconformist
NOVEM	nine	November, novena
nona		nonagon, nonagenarian
OB-	toward, against	obstacle, obstruct
oc-		occult, occur
of		offend
op-		oppose
OCTA	eight	octagon, octavo
OCTO-	eight	octet, October
OFF	from	offside, offspring
OUT	beyond, complete	outdo, outclass
OVER	over, beyond, above	overalls, overwrought

Prefix	Meaning	Examples
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PERI	around	periphery, perimeter
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QUIN quint	five	quinquereme quintet, quintessence
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RETRO-	back	retroactive, retrospect
SE-	aside, apart	secret, secede
SEMI-	half	semicircle, semifinal
SEPT septem-	seven	Septuagenarian, Septuagint September
SEX-	six	sextet, sextant
SUB- suc suf sug sup- sus-	under, beneath	submarine, submerge succumb, succinct suffer, suffix suggest supplant, supply suspend, sustain
SUPER supra	over, above	superficial, superimpose suprarenal, supraliminal
SYN sym- syl-	with, together	synagogue, synthesis symphony, symmetry syllogism, syllable
TETRA	four	tetrarch, tetrameter
TRANS- tra	across, over	transfer, transmit traduce, traverse
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Prefix	*Meaning* / Examples
	Meaning out of
EC-	ecstasy, appendectomy
ex	exodus, exegesis
	Meaning in, on
EN	endemic, entomology
	Meaning nine
ENNEA	ennead
	Meaning upon, beside
EPI	epitaph, epitomize
ep	epoch, epode
eph	ephemeral
	Meaning equal
EQUI	equivocate, equilibrium
	Meaning out, from, away
EX	exigency, expatriate
e-	evoke, eliminate
ef	efficacious, effect
	Meaning before, in front of
FORE-	forewarn, foremost
	Meaning one hundred
HECTO-	hectograph, hectometer
	Meaning half
HEMI	hemisphere, hemiplegia
	Meaning seven
HEPT	heptagon, hebdomadal
	Meaning six
HEX	hexagon, hexapod
	Meaning in, into, on
IN (used with verbs and nouns)	intrude, inure
il	illuminate, illiterate
im	import, imbibe
ir-	irrigate, irradiate
	Meaning not
IN (used with adjectives)	infallible, informal
ig	ignoble, ignorant
il-	illicit, illegal
im	immodest, improper
ir	irrational, irregular
	Meaning between
INTER	international, interfere
	Meaning within, inside
INTRO-	introvert, introspect
intra	intravenous, intramural
	Meaning one thousand
KILO-	kilogram, kilowatt
	Meaning bad, badly
MAL-	malefactor, malevolent
	Meaning one thousand
MILLI	milliard, million
mille-	millennium, mile
	Meaning error, defect, wrong, badly
MIS-	mistake, miscreant
	Meaning one
MONO-	monopoly, monogamy
	Meaning many
MULTI	multitude, multiple
	Meaning current
NEO-	neologism, neophyte
	Meaning nothing
NIL-	nil
nihil-	nihilism, annihilate
nullus-	nullify, annul
	Meaning not
NON	nonsense, nonconformist
	Meaning nine
NOVEM	November, novena
nona	nonagon, nonagenarian
	Meaning toward, against
OB-	obstacle, obstruct
oc-	occult, occur
of	offend
op-	oppose
	Meaning eight
OCTA	octagon, octavo
	Meaning eight
OCTO-	octet, October
	Meaning from
OFF	offside, offspring
	Meaning beyond, complete
OUT	outdo, outclass
	Meaning over, beyond, above
OVER	overalls, overwrought

PARA — *Meaning:* beside
parallel, paradox

PENTA- — *Meaning:* five
pentagon, pentathlon

PER- — *Meaning:* through, throughout
persist, permeate

PERI- — *Meaning:* around
periphery, perimeter

POLY — *Meaning:* many
polyglot, polysyllabic

POST — *Meaning:* after
posterior, postprandial

PRE- — *Meaning:* before (in place or time)
precursor, precede

PRO- — *Meaning:* forward, in favor of
promulgate, provoke

PRO- — *Meaning:* before, forward
prolific, prologue

QUAD- — *Meaning:* four
quadrant, quadrangle
quadri- quadrille, quadrilateral

QUIN- — *Meaning:* five
quinquereme
quint quintet, quintessence

RE- — *Meaning:* again, back
relapse, renegade

RETRO- — *Meaning:* back
retroactive, retrospect

SE- — *Meaning:* aside, apart
secret, secede

SEMI- — *Meaning:* half
semicircle, semifinal

SEPT — *Meaning:* seven
septem- Septuagenarian, Septuagint
September

SEX — *Meaning:* six
sextet, sextant

SUB- — *Meaning:* under, beneath
submarine, submerge
suc succumb, succinct
suf suffer, suffix
sug suggest
sup- supplant, supply
sus- suspend, sustain

SUPER — *Meaning:* over, above
superficial, superimpose
supra suprarenal, supraliminal

SYN — *Meaning:* with, together
synagogue, synthesis
sym symphony, symmetry
syl- syllogism, syllable

TETRA — *Meaning:* four
tetrarch, tetrameter

TRANS- — *Meaning:* across, over
transfer, transmit
tra traduce, traverse

TRI — *Meaning:* three
triplets, trivet

UN — *Meaning:* not
unethical, uninspired

UNDER- — *Meaning:* below, less than
undertow, underrate

UNI — *Meaning:* one
unity, unique

WITH — *Meaning:* from, against
withstand, withdraw

Noun Suffixes

Suffix — *Current Words*

ACY — *Meaning:* state of, act of, quality of
celibacy, democracy

AN (concrete) — *Meaning:* one who does, is concerned with
partisan, barbarian
-ant participant, vagrant
-ent student

ANCE — *Meaning:* state of, act of, quality of
severance, resistance
-ence diligence, subsistence

ANCY — *Meaning:* state of, act of, quality of
buoyancy, hesitancy
-ency agency, emergency

	Meaning	state of, act of, doctrine or quality of
ATION (abstract)		abnegation, vituperation
ition		cognition, ignition

	Meaning	quality condition, domain
DOM		kingdom, freedom

	Meaning	one who does, or is concerned with
EER		engineer racketeer
-ier		bombardier, clothier

	Meaning	one who does, is concerned with
ER (concrete)		necromancer
-ar		scholar
ier		clothier
-or		realtor

	Meaning	state of
HOOD		boyhood, statehood
	Meaning	act, quality
ICE		cowardice, malice

	Meaning	state of act of doctrine or quality of
ISM (abstract)		absolutism, agrarianism

	Meaning	state of being result, manner process
MENT		government, detriment

	Meaning	state, quality property
-OR		ardor honor

	Meaning	state of condition
TUDE		servitude, altitude

	Meaning	state of act of doctrine or quality of
TY (abstract)		modesty security
ity		gratuity, parity

Adjective Suffixes

Suffix		*Current Words*
	Meaning	capable, able to
ABLE		*amenable, culpable*
ible		credible, visible

	Meaning	resembling full of pertaining to
-AC		elegiac, cardiac

	Meaning	resembling full of, belonging to
AL		thermal, palatal
ical		categorical, diametrical

	Meaning	like, pertaining to, belonging to
AR		circular insular
-ary		sedentary luminary
-ory		mandatory respiratory

	Meaning	being possessing
ATE		delicate, sedate
ite		finite, favorite

	Meaning	beginning to be, slightly
ESCENT		adolescent, convalescent

	Meaning	in the style of, manner of
ESQUE		picturesque, grotesque

	Meaning	resembling full of belonging to
-IC		dialectic, anemic
ical		inimical, maniacal
	Meaning	like, of pertaining to
ID		acrid, stolid

	Meaning	pertaining to resembling
INE		asinine, canine

	Meaning	resembling full of belonging to
ISH		foolish, bookish

	Meaning	resembling relating to
IVE		native, furtive

	Meaning	without
LESS		reckless, brainless
	Meaning	resembling full of belonging to
OUS		ludicrous
ious		gracious, sagacious

	Meaning	having
-SOME		lonesome, cumbersome

Verb Suffixes

All of the following Verb Suffixes mean. TO MAKE.

Suffix	*Current Words*
ATE	alleviate, enervate
EN	foreshorten, moisten
ESCE	effervesce, deliquesce
FY	liquefy mortify
-IZE	apologize, economize

GLOSSARY OF 1000 CORE WORDS

The 1000 core words are here arranged alphabetically. The pronunciation, part of speech, chapter in which the core word appears, and definition are given. For example:

Core Word Pronunciation Part of Speech Chapter
abet (uh-*bet*) v., 4
Definition—To act, incite, encourage (chiefly in a bad sense)

The pronunciations in this section are taken from *Words: The New Dictionary*[1]—in some instances adapted from it. "Each word for which pronunciation is necessary," the editors explain, "is respelled in the closest approximation to the most common values of English vowels and consonants. The stressed syllable is printed in *italic* type. Thus, for the word inhibition the following pronunciation is given:

in-hih-*bish* n.

Say it aloud and place emphasis on the *bish* syllable. The word pronounces itself."

The system employed is simple and generally effective. On occasion, however (especially in respelling foreign words), precise notations cannot be achieved. When in doubt, therefore, check with a dictionary employing a more nearly precise phonetic system.

[1] With the courteous permission of the publishers, Grosset & Dunlap, Inc., New York.

A

abet (uh-*bet*) v., 4 To aid, incite, encourage (chiefly in a bad sense)
abject (ab-jekt) adj., 13 Humiliating or debasing; mean or servile; wretched or despicable.
abjure (ab-*joor*) v., 11. To renounce under oath; to swear off.
abnegation (ab-nih-*gay*-shun) n., 6 Renunciation, act of denying or rejecting.
abominate (uh-*bom*-uh-nayt) v., 2. To loathe, detest, despise.
aborigine (ab-uh-*rij*-uh-nee) n., 2. First or primitive inhabitants of a country
abortive (uh-*bor*-tiv) adj., 19 Premature, ineffectual, coming to naught.
abrogate (ab-ruh-gayt) v., 9 To repeal, abolish, make void.
abscond (ab-*skond*) v., 3 To run away or depart or hide—generally to escape punishment of the law
absolutism (ab-suh-loo-tizm) n., 6. The system or principle of uncontrolled power; despotism.
abysmal (uh-*biz*-mul) adj., 9 Bottomless.
acclimate (uh-*kly*-mit, ak-luh-mayt) v., 5 To accustom or inure to a foreign climate; and, by extension, to new or different conditions.
accredit (uh-*kred*-it) v., 10. To approve or authorize; to trust or believe; to procure approval, honor or credit for someone or something.
accretion (uh-*kree*-shun) n., 5 To become or grow by addition of new matter.
acerbity (uh-*sur*-bih-tee) n., 8 Sourness, bitterness, or sharpness of temper, manner, speech, and the like.
acolyte (*ak*-uh-lyt) n., 5 One (usually a boy) whose duty it is to assist the officiating priest in celebration of the mass; by extension, an attendant, assistant, or disciple.
acrimonious (ak rih *moh* nee us) adj., 11 Sharp, severe, sarcastic in speech.
acumen (uh-*kyoo*-m'n) n., 5 Keenness of perception or insight.
adamant (*ad*-uh-m'nt) adj., 2. Hard or impenetrable, like a stone.
addict (uh-*dikt*) v., 3 To be controlled by a habit (generally used in a bad sense)
adduce (uh-*dyoos*) v., 5 To offer, cite, or name as proof or corroboration.
adjudicate (uh-*joo*-dih-kayt) v., 5 To judge, or to pronounce judgment upon.
adulation (ad-yoo-*lay*-shun) n., 19 Servile flattery
adversary (*ad*-ver-ser-ee) n., — Enemy
aegis (*ee*-jis) n., 14 The shield of Minerva; by extension, anything that shields or protects.
aesthetic (es-*thet*-ik) adj., 8 Pleasing to one's taste or one's sense of the beautiful; having a love for beauty or beautiful things.
aesthetics (es-*thet*-iks) n., 17 The branch of philosophy that treats of the beautiful.
affable (*af*-uh-b'l) adj., 1 Courteous, amiable, pleasant.
afflatus (uh-*flay*-tus) n., 5 Inspiration, a "breathing into" by divine power (chiefly a poetic usage)
affluent (*af*-loo-ent) adj., 16. Wealthy, rich in worldly goods; abounding or flowing freely
aggrandize (uh-*gran*-dyz) v., 5 To raise or enlarge in scope, range, honor, wealth, power or the like.
agrarianism (uh-*grair*-ee-un-izm) n., 6 Doctrine favoring equal or fair distribution of land among farmers.
allege (uh-*lej*) v., 11 To supply reasons in support of an argument; to affirm, assert, or maintain.
alleviate (uh-*lee*-vee-ayt) v., 6 To make lighter or easier, as pain, sorrow or labor
allude (uh-*lood*) v., — To hint at something without mentioning it directly
amalgam (uh-*mal*-gum) n., 15 A mixture of mercury and another metal; by extension, any blending, merging, mixture, or compound.
ambidextrous (am bih-*dek*-strus) adj., 15 Able to use either hand as well or almost as well as the other
ambiguous (am-*big* yoo-us) adj., 1 Having more meanings than one; uncertain or doubtful.
amelioration (uh-meel-yuh-*ray*-shun) n., 12. The process or act of making better; improvement.
amenable (uh-*mee*-nuh-b'l) adj., 4. Capable of being managed easily; agreeable.
amnesty (*am*-nes-tee) n., 13. A general pardon of past offenses, usually by a government.
amorphous (uh-*mor*-fus) adj., 15 Without regular structure or definite form; characterless.
amuck (uh-*muk*) adv., 7 Wildly in a murderous frenzy
anachronism (uh-*nak*-ruh-nizm) n., 5 An error in chronology as locating an event at a time when it could not have happened, or an object at a

Meaning	state of, act of, doctrine or quality of
ATION (abstract)	abnegation, vituperation
ition	cognition, ignition

Meaning	quality condition, domain
DOM	kingdom, freedom

Meaning	one who does, or is concerned with
EER	engineer racketeer
ier	bombardier clothier

Meaning	one who does, is concerned with
ER (concrete)	necromancer
-ar	scholar
ier	clothier
-or	realtor

Meaning	state of
-HOOD	boyhood statehood
Meaning	act, quality
ICE	cowardice, malice

Meaning	state of act of doctrine or quality of
ISM (abstract)	absolutism, agrarianism

Meaning	state of being result, manner, process
MENT	government, detriment

Meaning	state, quality, property
-OR	ardor honor

Meaning	state of condition
TUDE	servitude, altitude

Meaning	state of act of, doctrine or quality of
-TY (abstract)	modesty security
ity	gratuity parity

Adjective Suffixes

Suffix	*Current Words*
Meaning	capable, able to
ABLE	amenable, culpable
ible	credible, visible

Meaning	resembling full of pertaining to
-AC	elegiac, cardiac

Meaning	resembling full of, belonging to
AL	thermal, palatal
ical	categorical, diametrical

Meaning	like, pertaining to belonging to
AR	circular insular
-ary	sedentary luminary
-ory	mandatory respiratory

Meaning	being, possessing
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ite	finite, favorite

Meaning	beginning to be, slightly
ESCENT	adolescent, convalescent

Meaning	in the style of, manner of
ESQUE	picturesque, grotesque

Meaning	resembling full of, belonging to
-IC	dialectic, anemic
ical	inimical, maniacal
Meaning	like, of pertaining to
ID	acrid, stolid

Meaning	pertaining to, resembling
INE	asinine, canine

Meaning	resembling full of belonging to
ISH	foolish, bookish

Meaning	resembling relating to
IVE	native, furtive

Meaning	without
LESS	reckless, brainless
Meaning	resembling full of belonging to
-OUS	ludicrous
ious	gracious, sagacious

Meaning	having
-SOME	lonesome, cumbersome

Verb Suffixes

All of the following Verb Suffixes mean. TO MAKE.

Suffix	*Current Words*
-ATE	alleviate, enervate
EN	foreshorten, moisten
ESCE	effervesce, deliquesce
FY	liquefy mortify
-IZE	apologize economize

buoyant (*boy*-ant) *adj.*, *12* Light enough to float, not easily sunk; not easily depressed, cheerful.
buxom (*buk*-som) *adj.*, *8* Pleasingly plump.

C

cabal (kuh-*bal*) *n.*, *7* A group that engages in intrigue, conspiracy, plot.
cajole (kuh-*johl*) *v.*, *4* To wheedle, coax; to obtain by flattery.
calumny (*kal*-um-nee) *n.*, *13* Slander, false accusation.
candor (*kan*-der) *n.*, *3* Frankness, openness, sincerity.
cant, *n.*, *1* Whining, affected, hypocritical speech; thieves' jargon.
caprice (kuh-*preess*) *n.*, *4* Sudden and unmotivated notion, a whim, fancy.
captious (*kap*-shus) *adj.*, *3* Disposed to find fault, over-critical.
carnivorous (kahr-*niv*-er-us) *adj.*, *8* Flesh-eating.
caress (kuh-*ress*) *v.*, *4* To stroke and embrace.
castigate (*kas*-tih-gayt) *v.*, *6* To correct or chastise; to criticize severely.
casuistry (*kaz*-yoo-iss-tree) *n.*, *9* Overnicle reasoning.
catechism (*kat*-eh-kizm) *n.*, *11* A book on any subject, drawn up in the form of questions and answers.
categorical (kat-eh-*gor*-ih-k'l) *adj.*, *6* Without possibility of evasion; positive, direct, absolute.
caucus (*kaw*-kus) *n.*, *13* A meeting of leaders or members of a party or of a group within a party for the purpose of deciding on candidates, policy or the like.
caustic (*kaws*-tik) *adj.* *11* Sharp, biting, corrosive.
cavil (*kav*-'l) *v.*, *15* To find fault unreasonably, quibble.
celibate (*sel*-ih-bayt) *n.*, *11* One who is unmarried, especially for religious reasons.
centrifugal (sen-*trif*′ yuh-g'l) *adj.*, *6* Tending to move from the center.
centripetal (sen-*trip*-uh-t'l) *adj.*, *6*, Tending to move toward the center.
chaff, *n.*, *1*, To banter, to tease.
chaotic (kay-*ot*-ik) *adj.*, *13*, Thoroughly disordered or confused.
charlatan (*shahr*-luh-t'n) *n.*, *10* A quack or pretender.
chary (*chayr*-ee), *adj.*, *4* Reluctant, cautious, frugal, sparing.
chauvinism (*shoh*-v'n-izm) *n.*, *14*, Exaggerated, quarrelsome patriotism.
cherish (*cher*-ish) *v.*, *11* To regard tenderly and affectionately; to harbor (as ill-will).
chiaroscuro (kih-ah-roh-*skyoo*-roh) *n.*, *2* Distribution of lights and shadows in a picture.
chicanery (*shih*-*kayn*-er-ee) *n.*, *9* Sharp practices, unfair tricks to obscure truth.
chimera (kih-*meer*-uh) *n.*, *14* A creature of the imagination (as the Greek chimera, which was fabled to have the head and body of a lion, the belly of a goat, and the tail of a dragon); a wild or foolish fancy.
choleric (*kol*-uh-rik) *adj.*, *3* Easily irritated or excited to anger.
churlish (*churl*-ish) *adj.*, *8* Rude, surly, sullen.
circumspect (*serk*-um-spekt) *adj.* *16* Cautious, prudent, wary.
circumvent (ser-kum-*vent*) *v.* *3* To gain an advantage over another to outwit; to go around.
clairvoyant (*clare*-voy-unt) *adj.*, *10*. One who sees or knows what is not present to the sight or other senses.
clandestine (klan-*des*-t'n) *adj.* *6* Secret, hidden, private (especially applied to wrong actions).
clique (*kleek*) *n.*, *7* A party faction, set, or group.
coalesce (koh-uh-*less*) *v.* *6* To grow together unite, adhere in a mass.
coeval (koh-*ee*-v'l) *adj.*, *11* Existing at the same period of time—usually applied to persons, objects or events existing long ago and existing together for a long time.
coherent (koh-*heer*-ent) *adj.*, *4* Sticking together; consistent, logically related.
cohesive (koh-*hees*-iv) *adj.*, *11* Sticking together.
colloquialism (kuh-*loh*-kw ee-ul-izm) *n.*, *2* A word or phrase used in conversation in everyday speech.
collusion (kol-*oo*-zhun) *n.*, *1* A secret agreement, generally for some evil purpose; conspiracy.
colony (*kol*-uh-nee) *n.*, *17* An area separate from a parent state but subject to it, either voluntarily or involuntarily.
commodious (kuh-*moh*-dee-us) *adj.* *5* Spacious, roomy; convenient, suitable useful.
compendium (kum-*pen*-dee-um) *n.*, *5* A book containing the substance of a larger work, abridgement or summary.
complacent (kum-*play*-sent) *adj.* *3* Self-satisfied.
complement (*kom*-plih-ment) *v.* *19* To complete, fill up, supply a deficiency.
compliment (*kom*-plih-m'nt) *v.* *19* To praise or congratulate.
composite (k'*om*-ee-it) *n.*, *19* Something made up of distinct parts, elements, styles, or the like.
comprehensible (kom-pree-*hen*-suh-b'l) *adj.*, *10*. Able to be understood.
compunction (k'm-*punk*-sh'n) *n.*, *1* The sting of conscience, remorse.
comprehension (kom-pree-*hen*-sh'n) *n.*, *17* The power of understanding.
concatenation (k'n-kat-uh-*nay*-sh'n) *n.*, *5* A series or related order of things connected with or dependent upon one another; interrelationship or interdependence.
concentric (k'n-*sent*-rik) *adj.*, *5* Having a common center, as circles within each other.
concise (kun-*syse*) *adj.*, *1* Brief short, succinct.
conclave (*kon*-klayv) *n.*, *5* A meeting of cardinals for the election of a pope; by extension, any secret assembly or private meeting.
concomitant (kon-*kom*-uh-t'nt) *adj.*, *16* Accompanying or attending.
condign (kun-*dyne*) *adj.*, *8* Deserved, merited—especially applied to punishment.
conditioned (kun-*dih*-sh'nd) *adj.*, *18* Learned by repetition or strong emotional reinforcement.
conducive (kun-*dyoo*-siv) *adj.*, *5* contributing, promoting, favorable.
congruent (*kong*-groo-ent) *adj.*, *5* Corresponding, harmonious, agreeing, consistent.
connive (kuh-*nyve*) *v.* *3*. To overlook a wrong act, to pretend ignorance of the faults of another.
consensus (kuhn-*sen*-suhs) *n.* *11* General agreement or concord.
contiguous (kon-*tig*-yoo-us) *adj.* *5* Neighboring or adjoining.
contraband (*kon*-truh-band) *n.* *2*. Traffic in prohibited or illegal goods, especially the materials of war.
contrapuntal (kon-truh-*pun*-t'l) *adj.*, *20* Composed of two or more independent melodies played together.
contrite (kon-*tryte*) *adj.*, *17* Penitent, humble; affected with grief often for having offended against God or God's laws.
contumely (*kon*-tyoo-muh-lee) *n.*, *1* Insolence, excessive rudeness, contemptuous speech.
conversant (kun-*ver*-s'nt) *adj.*, *16* Familiar through use, study or intercourse.
convolution (kon-vuh-*loo*-sh'n) *n.*, *5* A winding or twisting; especially a rolling of a thing on itself or one thing on another.
coquetry (*koh*-keh-tree, koh-*ket*-ree) *n.*, *4* Flirtation motivated by vanity.
corporeal (kor-*por*-ee-'l) *adj.*, *20*. Bodily, materially.
correlate (kor-uh-layt) *v.* *10* To relate or refer to each other; a systematic and reciprocal relationship.
corroborate (cor-*rob*-o-rate) *v.* *10*. To strengthen or confirm.
corrupt (kuh-*rupt*) *adj.*, *12*. Debased or depraved; rotten or tainted.
coterie (*koh*-tuh-ree) *n.* *2*. A select party or group.
coup (*koo*) *n.*, *5*. A blow, a stroke.
coup d'état (*koo* day-*tah*) *n.*, *7* A sudden blow against the state; revolutionary seizure of state power.
covert (*kuh*-vert) *adj.* *17* Concealed, private, secret, disguised.
credible (*kred*-ih-b'l) *adj.*, *6* Worthy of credit or belief.
crenellated, *adj.* *11* Duplicated or de-

time when it could not have existed, etc.

analogy (uh-*nal*-oh jee) *n.*, *9* Resemblance or similarity between two or more things.

anarchic (an-*ark* ik) *adj* *5* Lawless, chaotic.

anathema (uh *nath*-uh-muh) *n.*, *3* Curse or denunciation; excommunication.

Anglicism (*ang*-glih-cizm) *n.*, *6* An English (as distinct from an American) usage.

animadversion (an ih mad *ver* zhun) *n* *15* Blame, censure, reproof

animism (*an*-ih-mizm) *n.*, *17* The attribution of soul to natural objects; the belief that all things possess a soul.

anomaly (uh-*nom*-uh-lee) *n.*, *5* A departure from the normal; an irregularity a freak.

antediluvian (an-teh-dih-*loo*-vee-un) *adj* *18* Literally before the Deluge or Flood (of Noah); by extension, antiquated.

anthology (an-*thol*-uh-jee) *n* *11* A collection of poetry or prose; a choice selection.

anthropoid (*an* thruh-poyd) *adj* *4* Resembling man.

anthropomorphism (an-thruh-poh *mor* fizm) *n.*, *17* The attribution of human qualities to objects, animals, and especially to gods.

antic (*an*-tick) *adj.*, *3* Odd or fanciful.

anticlimax (an-tih-*kly*-maks) *n.*, *15* An abrupt descent from the impressive.

antipathy (an-*tip*-uh-thee) *n.*, *6* Hatred or aversion.

antipodal (an-*tip*-oh-dehl) *adj.*, *15* On the opposite side of the globe; hence, anything opposed or opposite

antithetical (an-ti-*thet*-ik-al) *adj.*, *12* Contrasting or opposed.

apathy (*ap*-uh-thee) *n.*, *3* Without interest or feeling

aphorism (*af*-uh-rizm) *n* *6* A terse saying expressing an important truth.

aphrodisiac (af-ruh-*diz*-ee-ak) *n.*, *13* A drug food or drink that excites sexual desires.

aplomb (uh-*plom*) *n.*, *2* Self-possession, assurance.

apocryphal (uh-*pok*-rih f'l) *adj* *5* Doubtful, uncertain—like the Apocrypha, the books regarded by some Christians as authentically inspired Scripture but rejected by others.

apotheosis (uh-poth-ee-*oh*-sis, ap-uh-*thee*-uh-sis) *n.*, *5* The glorification or exaltation of a person or of an ideal or even of an object.

apposite (*ap*-uh-zit) *adj.*, *5* Well-put, suitable, pertinent.

apprehend (ap-reh-*hend*) *v.*, *11* To grasp or understand.

aquiline (*ak* wih-lyn, -lin) *adj.*, *2* Hooked or curved, like the beak of an eagle.

arbitrary (*arb*-buh-trehr-ee) *adj.*, *10* Uncontrolled by law or reason; tyrannical.

artifact (*ar*-tih fakt) *n.*, *18* A product of human art or craft, especially a primitive or early product.

asinine (*as*-i-nyne) *adj.*, *13* Like an ass foolish, silly

asseverate (uh-*sev*-uh-rayt) *v* 7 To declare earnestly and emphatically

assiduous (uh-*sid* yoo-us) *adj.*, *3* Diligent, industrious, hard-working

assonance (*as*-uh-n'ns) *n.*, *3* Similarity of vowel sounds, along with dissimilarity of consonant sounds (mate, fume)

assuage (uh *swayj*) *v.*, *20* To soften, mitigate, allay

astute (uh *styoot*, *stoot*) *adj.*, *12* Sharp, discerning shrewd.

atavism (*at* uh-vizm) *n.*, *6* Reversion to characteristics of ancestors, especially primitive ancestors; reappearance of an ancestral characteristic or peculiarity

atheism (*ay*-thee-izm) *n.*, *12* Disbelief in the existence of God.

atypical (ay-*tip*-ih-k'l) *adj.*, 2. Not conforming to type; irregular or abnormal.

augury (*awg*-yer-ee) *n.*, *13* Foretelling events by the flight of birds; by extension, any omen, prediction, indication.

auspicious (aws-*pish*-us) *adj.*, *2* Having or presenting omens of success.

autonomous (aw-*ton*-uh-mus) *adj.*, *4* Self-governing independent.

avant garde (uh-*vahn* *gard*) *n.*, 7 Vanguard; those at the forefront of a movement, usually an intellectual or cultural movement.

avatar (av-uh-*tahr*) *n.*, *20* The descent of a deity in visible form (Hindu); hence, any incarnation or embodiment.

avuncular (uh-*vung* kyoo-ler) *adj.*, *17* Like an uncle.

B

Bacchanalia (bak-uh-*nay*-lee-uh) *n.*, *14* A Roman festival in honor of Bacchus, the god of wine hence, a *drunken revel*.

bailiwick (*bayl*-uh-wik) *n.*, *2* One's own area of skill, aptitude, work, or the like.

baleful (*bayl*-ful) *adj.*, *6* Malignant, poisonous.

banal (*bay*-n'l, buh-*nal*) *adj.*, *4* Trite, commonplace

barbaric (bahr-*bar*-ik) *adj.*, *8* Uncivilized, primitive by extension, crude but often striking and even splendid.

barbarous (*bahr*-buh-rus) *adj.*, *8* Uncivilized, primitive; by extension, cruel and savage

baroque (buh-*rohk*) *adj* *4* Ornate (like the 16th century baroque style developed in Italy characterized by excessive ornamentation)

bas-relief (bah-rih-*leef*) *n.*, *4* A kind of sculpture in which the figures are but slightly raised, so that they project from the background only a little.

bathos (*bay*-thos) *n* *19* A strained or false pathos, absurd in its effect.

beatific (bee-uh-*tif*-ik) *adj.*, *1* Causing or characterized by blessedness or deep happiness.

beguile (bee-*gyle*) *v.*, 2. To charm into forgetfulness or error

benedict (*ben*-uh-dikt) *n.*, *14* A newly married man, especially one who had seemed to be a confirmed bachelor

benign (bih-*nyne*) *adj.*, *9* Kind and gentle in disposition, healthful or favorable.

bête noire (*bayt nwar*) *n.*, 7 Literally "black beast"; something or someone that troubles or frightens.

bifurcate (*by-fer*-kayt) *v* *11* To separate or divide into two branches.

bigot (*big*-ut) *n.*, *13* Someone blindly and intolerantly prejudiced.

bilious (*bil*-yus) *adj.*, 2. Ill-tempered (literally having an excess of bile, the bitter yellow liquid secreted by the liver)

billingsgate (*bil*-ingz-gayt) *n.*, *14*. Foul language or abuse (like that spoken at Billingsgate, the great London fish market)

bizarre (bih-*zahr*), *adj.*, *9* Strange, odd, fantastic.

blackguard (*blag*-erd) *n.*, *10* A mean, low coarse person a scoundrel.

blacklist, *n.*, *10* A list comprising the names of persons regarded as dangerous or undesirable.

blasé (blah-*zay*) *adj.*, 7 Bored by the world and its pleasures, world-weary and jaded.

blatant (*blay*-t'nt) *adj.*, *10*. Loud-mouthed crudely apparent.

blithe (*blythe*) *adj.*, *8* Gay merry joyous.

bluestocking, *n.*, *10*. A woman who is devoted, or who seems to be devoted to cultural pursuits.

bombast (*bom*-bast) *adj.*, *11* Inflated, high-sounding speech or writing

bona fide (*boh*-nuh *fy*-dih, *fyd*) *adj.*, *15* Literally "in good faith"; without fraud or deception.

boniface (*bon*-uh-fays) *n.*, *14* A sleek, jovial landlord of an inn or tavern.

boor *n.*, *3* A coarse, ill-mannered person.

boot, *n.*, *17* Added to the bargain to boot.

bowdlerize (*bowd*-ler yze) *v.*, *14* To expurgate especially in prudish fashion.

brackish (*brak*-ish) *adj.*, *16*. Distasteful; not quite fresh; somewhat salty

buoyant (*boy*-ant) *adj.*, *1* Light enough to float, not easily sunk; not easily depressed, cheerful.
buxom (*buk*-sum) *adj.*, *5* Plump; plumply pretty.

C

cabal (kuh-*bal*) *n.*, A group that engages in intrigue, conspiracy, plot.
cajole (kuh-*johl*) *v.* *4* To wheedle, coax, to obtain by flattery.
calumny (*kal*-um-nee) *n.*, *13* Slander, false accusation.
candor (*kan*-der) *n.*, *1* Frankness, openness, sincerity.
cant, *n.*, *1.* Whining, affected, hypocritical speech; thieves' jargon.
caprice (kuh-*preess*) *n.*, *4* Sudden and unconsidered notion, whim, fancy.
captious (*kap*-shus) *adj.*, *1* Disposed to find fault, over-critical.
carnivorous (kahr-*niv*-er-us) *adj.*, *8* Flesh-eating.
careen (kuh-*reen*) *v.* *4* To strike and rebound.
castigate (*kas*-tih-gayt) *v.* *6* To correct or chastise; to censure severely.
casuistry (*kaz*-yoo-is-tree) *n.*, *9* Overtsubtle reasoning.
catechism (*kat*-uh-kizm) *n.*, *11* A book on any subject, drawn up in the form of questions and answers.
categorical (kat-uh-*gor*-ih-k'l) *adj.*, *1* Without possibility of evasion; positive, direct, absolute.
caucus (*kaw*-kus) *n.*, *15* A meeting of leaders or members of a party or of a group within a party for the purpose of deciding on candidates, policy or the like.
caustic (*kaws*-tik) *adj.*, *11* Sharp, biting, corrosive.
cavil (*kav*-'l) *v.*, *15* To find fault unreasonably, quibble.
celibate (*sel*-ih-bayt) *n.*, *11* One who is unmarried, especially for religious reasons.
centrifugal (sen-*trif*-yuh-g'l) *adj.*, *6* Tending to move away from the center.
centripetal (sen-*trip*-uh-t'l) *adj.* *6*. Tending to move toward the center.
chafe, *v.*, *1* To irritate, to tease.
chaotic (kay-*ot*-ik) *adj.*, *11* Thoroughly disordered or confused.
charlatan (*shahr*-luh-t'n) *n.*, *10*. A quack or pretender.
chary (*chayr*-ee) *adj.*, *4* Reluctant, cautious, frugal, sparing.
chauvinism (*shoh*-v'n-izm) *n.*, *14*. Exaggerated, quarrelsome patriotism.
cherish (*chehr*-ish) *v.*, *11* To regard tenderly and affectionately; to harbor (as ill-will).
chiaroscuro (kih-ah-ruh-*skyoo*-roh) *n.*, Distribution of lights and shadows in a picture.
chicanery (chih-*kayn*-er-ee) *n.*, *3*. Tricky practices, unfair tricks to obtain truth.
chimera (kuh-*meer*-uh) *n.*, *14* A creature of the imagination (as the Greek chimera, which was fabled to have the head and body of a lion, the belly of a goat, and the tail of a dragon); a wild or foolish fancy.
choleric (*kol*-uh-rik), *adj.* *3* Easily irritated or excited to anger.
churlish (*churl*-ish) *adj.* *3* Rude, surly, sullen.
circumspect (*sur*-kum-spekt) *adj.*, *16*. Cautious, prudent, wary.
circumvent (ser-kum-*vent*) *v.* *5* To gain an advantage over another; to outwit; to go around.
clairvoyant (clayr-*voy*-ant) *adj.*, *10* One who sees or knows what is not present to the sight or other senses.
clandestine (klan-*des*-t'n) *adj.*, *6*. Secret, hidden, private (especially applied to wrong actions).
clique (*kleek*) *n.*, 7 A party, faction, set, or group.
coalesce (koh-uh-*less*) *v.* *6* To grow together, unite, adhere in a mass.
coeval (koh-*ee*-v'l) *adj.*, *11* Existing at the same period of time—usually applied to persons, objects or events existing long ago and existing together for a long time.
coherent (koh-*heer*-ent) *adj.*, *4* Sticking together; consistent, logically related.
cohesive (koh-*hees*-iv) *adj.*, *15* Sticking together.
colloquialism (kuh-*loh*-kwee-ul-izm) *n.*, *4*. A word or phrase used in conversation in everyday speech.
collusion (kol-*oo*-zhun) *n.*, *5* A secret agreement, generally for some evil purpose; conspiracy.
colony (*kol*-uh-nee) *n.*, *17* An area separate from a parent state but subject to it, either voluntarily or involuntarily.
commodious (kuh-*moh*-dee-us) *adj.*, *5* Spacious, roomy, convenient, suitable, useful.
compendium (kum-*pen*-dee-um) *n.*, *5* A book containing the substance of a larger work, abridgement or summary.
complacent (kum-*play*-sent) *adj.*, *3* Self-satisfied.
complement (*kom*-plih-ment) *v.* *19* To complete, fill up, supply a deficiency.
compliment (*kom*-plih-ment) *v.* *19* To praise or congratulate.
composite (k'm-*poz*-it) *n.*, *19* Something made up of distinct parts, elements, styles, or the like.
comprehensible (kom-pree-*hen*-suh-b'l) *adj.*, *10*. Able to be understood.
compunction (k'm-*punk*-sh'n) *n.*, *1* The sting of conscience, remorse.
comprehension (kom-pree-*hen*-sh'n) *n.*, *17* The power of understanding.
concatenation (k'n-kat-uh-*nay*-sh'n) *n.*, *5* A series or related order of things connected with or dependent upon one another; interrelationship or interdependence.
concentric (k'n-*sen*-trik) *adj.*, *5* Having a common center, as circles within each other.
concise (kun-*syse*) *adj.*, *1* Brief, short, succinct.
conclave (*kon* klayv) *n.*, *3* A meeting of cardinals for the election of a pope; by extension, any secret assembly or private meeting.
concomitant (kon-*kom*-uh-t'nt) *adj.*, *16* Accompanying or attending.
condign (kun-*dyne*) *adj.*, *8* Deserved, merited—especially applied to punishment.
conditioned (kun-*dish*-uh-nd) *adj.*, *13* Learned by repetition or strong emotional reinforcement.
conducive (kun-*dyoo*-siv) *adj.*, *5* contributing, promoting, favorable.
congruent (*kong*-groo-ent) *adj.*, *5* Corresponding, harmonious, agreeing, consistent.
connive (kuh-*nyve*) *v.* *3*. To overlook a wrong act, to pretend ignorance of the faults of another.
consensus (kuhn-*sen*-suhs) *n.*, *11* General agreement or concord.
contiguous (kon-*tig*-yoo-us) *adj.*, *5* Neighboring or adjoining.
contraband (*kon*-truh-band) *n.*, *4*. Traffic as prohibited or illegal goods, especially the materials of war.
contrapuntal (kon-truh-*pun*-t'l) *adj.* *20* Composed of two or more independent melodies played together.
contrite (kon-*tryte*) *adj.*, *17* Penitent, humble, affected with grief, often for having offended against God or God's laws.
contumely (*kon*-tyoo-muh-lee) *n.*, *1* Insolence, excessive rudeness, contemptuous speech.
conversant (kon-*ver*-s'nt) *adj.*, *16*. Familiar through use, study or intercourse.
convolution (kon-vuh-*loo*-sh'n) *n.*, *5* A winding or twisting, especially a rolling of a thing on itself or one thing on another.
coquetry (*koh*-kuh-tree, koh-*ket*-ree) *n.*, *4* Flirtation motivated by vanity.
corporeal (kor-*por*-ee-'l) *adj.*, *20* Bodily, materially.
correlate (kor-uh-layt) *v.*, *10*. To relate or refer to each other; a systematic and reciprocal relationship.
corroborate (cor-*rob*-o-rate) *v.*, *10*. To strengthen or confirm.
corrupt (kuh-*rupt*) *adj.*, *17* Debased or depraved; rotten or tainted.
coterie (*koh*-tuh-ree) *n.*, *2*. A select party or group.
coup (*koo*) *n.*, *3* A blow, a stroke.
coup d'état (*koo* day-*tah*) *n.*, *7* A sudden blow against the state; revolutionary seizure of state power.
covert (*kuh*-vert) *adj.* *17* Concealed, private, secret, disguised.
credible (*kred*-uh-b'l) *adj.* *6* Worthy of credit or belief.
crestfallen, *adj.*, *13* Dispirited or de-

time when it could not have existed, etc.

analogy (uh-*nal*-uh-jee) *n.*, 9 Resemblance or similarity between two or more things.

anarchic (an-*ark*-ik) *adj.*, 5 Lawless, chaotic.

anathema (uh-*nath*-uh-muh) *n.*, 13 Curse or denunciation.

cull, *v.*, 7 To pick out or select—either choice specimens or parts or inferior ones.

culpable (*kul*-puh-b'l) *adj.*, 6 Deserving blame or censure.

cursory (*ker*-suh ree) *adj.*, 20. Hasty without close attention, superficial.

cynosure (*sy*-noh-shoor) *n.*, 15 Any thing to which attention is strongly attracted or directed, like the pole star by which seamen formerly used to steer.

D

dalliance (*dal*-ee-uns) *n.*, 13 Dawdling lingering trifling away time; amorous toying

dastardly (*das*-terd-lee) *adj.*, 6 Cowardly mean, sneaking

debacle (deh-*bah*-k'l) *n.*, 11 A sudden flood or rush of waters by extension, a confused rout.

debauch (dee-*bawch*) *n.*, 2 Intemperance, excess in eating or drinking or indulgence in vice.

debilitating (deh *bil* ih tay ting) *adj* 17 Weakening or enfeebling.

debonair (deb-uh-*nayr*) *adj.*, 3 Good humored, pleasant, elegant.

decimate (*des*-ih-mayt) *v.*, 8 Literally to destroy a tenth part; by extension, to destroy any large part.

declivity (deh-*kliv*-ih-tee) *n.*, 5 A slope or gradual descent.

decorum (deh-*kor*-um) *n.*, 15 Propriety of speech or behavior

deduction (deh-*duk*-shun) *n.*, 19 Reasoning from the general to the particular from the known principles to the unknown.

defalcation (deh-fal-*kay*-sh'n) *n.*, 9 Breach of trust with regard to money

deferential (def-er-*en*-shul) *adj.*, 16 Yielding to the opinion or judgment of another respectful or expressing respect.

definitive (deh-*fin*-it-iv) *adj.*, 12. Decisive, final, determinate.

deft, *adj.*, 3 Dexterous, nimble, clever

delectable (deh-*lek*-tuh-b'l) *adj* 10 Highly pleasing

deleterious (del-uh-*tihr*-ee-us) *adj.*, 6 Injurious, destructive, detrimental.

delineate (deh-*lin*-ee-ayt) *v.*, 5 To sketch or design to draw a likeness in words to describe, as a character

demagogue (*dem*-uh-gog) *n.*, 1 One who tries to attain power by playing on the prejudices or ignorance of the people, an unprincipled leader or would-be leader

dementia (deh-*men*-shuh) *n.*, 4 A

Hooked or curved, like the beak of an eagle.

arbitrary (*arb*-buh-trehr-ee) *adj.*, 10 Uncontrolled by law or reason tyrannical.

artifact (*ar*-tih-fakt) *n.*, 13; *n.*, 3 The world or class of women who have lost status and reputation (as courtesans, for example)

demise (deh-*myze*) *n.*, 3 Death.

demoniacal (dee muh ny uh k'l) *adj* 4 Possessed by demons or evil spirits, or behaving as if so possessed.

denizen (*den*-uh-zun) *n.*, 2. A citizen, often a naturalized citizen; more generally any inhabitant or dweller

denotation (dee-noh-*tay*-shun) *n.*, 9 Signification, meaning

dependency (duh-*pen*-den-see) *n.*, 17 A possession or province, self governing to a large degree, which is not an integral part of the governing country

deprecatory (*dep*-ruh-kuh-tor-ee) *adj.*, 5 Disapproving; loosely apologetic.

derogatory (deh-*rog*-uh-toree) *adj.*, 15 Disparaging belittling

desecrate (*des*-uh-krayt) *v.*, 11 To profane something considered holy or sacred.

desuetude (*des*-wih-tood) *n.*, 5 Disuse or discontinuance of a custom or practice.

desultory (*des*-ul-tor-ee) *adj.*, 20 Leaping from one thing to another without method, aimless.

detergent (deh-*ter*-junt) *n.*, 18 A cleansing agent.

determinate (deh-*ter*-min-it) *adj.*, 17 Fixed, settled.

determinism (deh-*ter*-muh-niz-'m) *n.*, 6 The theory that man acts in response to forces over which he has no control.

detritus (deh-*try*-tus) *n.*, 5 Any accumulation of earth, sand, gravel, and rock-fragments formed by the wearing away of rocks.

devious (*dee*-vee-us) *adj.*, 5 Roundabout or rambling; by extension, going astray erring, not frank or straightforward.

dialectic (dy-uh-*lek*-tik) *n.*, 6 Pertaining to the art of logical argumentation.

Dickensian (Dih-*ken*-zee-'n) *adj.*, 14 Characteristic of the writings of Charles Dickens, English novelist (1812–1870)

diction (*dik*-shun) *n.*, 17 Choice of words distinctness of utterance.

didactic (dy-*dak*-tik) *adj.*, 17 Instructive or inclined to instruct.

dilatory (*dil*-uh-toh-ree) *adj.*, 15 slow tardy delaying.

dilute (dih-*loot*) *v.*, 9 To make thinner and weaker as by adding water

disburse (dis-*berss*) *v.*, 19 To pay out.

discreet (dis-*kreet*) *adj.*, 11 Prudent, careful, not rash.

developed in Italy characterized by excessive ornamentation)

bas-relief (bah-rih-*leef*) *n.*, 4 A kind of sculpture ... (dis-in-*jen*-yoo-us) *adj.*, 12. Not open, candid, frank; artful.

dispersion (dis-*per* zh'n) *n.*, 11 The act of scattering or the state of being scattered.

dissemble (dih-*sem*-b'l) *v.* 12. To disguise hypocritically to hide under a false appearance.

dissident (*dis*-uh-d'nt) *adj.*, 18. Not agreeing dissenting discordant.

dissipate (*dis*-uh-payt) *v.*, 17 To scatter completely; to vanish; to consume or squander

dissonance (*dis*-uh-n'ns) *n.*, 5 Discord, inharmonious sound disagreement or incongruity

distraught (dis-*trawt*) *adj.*, 17 Perplexed distracted, confused.

divergent (duh-*ver*-j'nt) *adj.*, 15 Departing or deviating or radiating from something; hence, differing or varying

docile (*dos*-'l) *adj* 20 Easily instructed or managed.

doctrinaire (dok-trih-*nair*) *n.*, 11 One who positively and confidently propounds opinions or theories.

doldrums (*dol*-dr'mz) *n.*, 2. Low spirits, gloom or listlessness.

dolorous (*doh*-ler-us) *adj.*, 1 Sorrowful.

dominion (duh-*min*-yun) *n.*, 17 A self-governing member-state of the British Commonwealth.

dormant (*dor*-m'nt) *adj.*, 20. Sleeping inactive, quiescent.

dotage (*doh*-tij) *n.*, 20 Feeble-mindedness in old age.

dour (*dewr* *dowr*) *adj* 2. Sour sullen, gloomy

dowdy (*dow*-dee) *adj.*, 2 Drab, unfashionable, or untidy in dress.

drivel (*driv*-'l) *n.*, 3 Nonsensical or foolish talk.

droll (*drohl*) *adj.*, 8 Odd, comical, laughable.

ductile (*duk*-t'l) *adj.*, 15 Easily drawn out in length, as wire.

dudgeon (*duj*-un) *n.*, 17 Bad humor anger resentment, indignation.

dullard (*dul*-erd) *n.*, 3 A person of slow or dim understanding a block head.

duplicity (doo-*plis*-uh-tee) *n.*, 16 Deceit, double-dealing guile.

duress (*dyoor*-ess, -*ess*) *n.*, 9 Constraint or compulsion, actual or threatened.

dynamic (dy-*nam*-ik) *adj.*, 9 Forceful, energetic, capable of exerting power

E

ebullient (eh-*bul*-y'nt) *adj* 15 Boiling over effervescent, enthusiastic.

ecclesiastic (uh-klee-zee-*as*-tik) *adj.*, 15 Pertaining to the church.

buoyant (boy-ant) *adj.*, 12. Light enough to float, not easily sunk; not easily depressed, cheerful.
eclectic ... Choosing doctrines, opinions, methods, etc. from different sources.
eclipse (ih-klips), *n.*, 13 The obscuration of the sun by the moon (*solar eclipse*) or of the moon by the earth's shadow (*lunar eclipse*); hence, overshadowing, obscuring light.
effete (eh-feet) *adj.*, 4 Worn out, barren, exhausted, without force or vigor.
effrontery (eh-frun-ter-ee) *n.*, 13 Impudence, shameless boldness.
egregious (eh-gree-jus) *adj.*, 11. Unusual or distinguished in a bad sense.
eke (eek) *v.*, 16. To add to, enlarge, spin out.
eleemosynary (el-eh-mos-ih-nehr-ee) *adj.*, 22. Relating to charity
elicit (eh-lis-it) *v.*, 11. To draw out, extract, deduce.
ellipsis (eh-lip-sis) *n.*, 19 Omission of a word or of words understood
elliptical (eh-lip-ti-k'l) *adj.*, 20. Having a part left out, as in a sentence which omits a word or words understood.
In printing, also the mark indicating omission of letters or words.
elusive (ee-loo-siv) *adj.*, 9 Deceptive, slippery, hard to grasp.
emaciated (eh-may-shee-ay-ted) *adj.*, 11 Lean, wasted away, having little flesh.
emanate (em-eh-nayt) *v.* 8. To issue or flow from a source, to arise or spring from.
emend (ih-mend) *v.*, 12. To correct or edit or alter for the better.
emergent (ih-mer-jent) *adj.*, 16. Appearing or rising suddenly
emeritus (ih-mehr-ih-tus) *adj.*, 15 Honorably relieved of duties but not of the title because of long or meritorious service; applied especially to college professors.
emetic (ih-met-ik) *n.*, 2. Any substance that causes vomiting, especially when taken internally
emollient (ih-mol-y'nt) *n.*, 17 A soothing ointment or application.
emolument (ih-mol-yuh-m'nt) *n.*, 13 Profit, compensation, salary
emotive (ih-moh-tiv) *adj.*, 11. Exciting or expressing strong feeling
empiricist (em-pir-ih-sist) *n.*, 16 One who practices the experimental method, one who believes that the senses and the experience of the senses are the only ways of knowing
emulous (em-yuh-lus) *adj.*, 13 Wanting to equal or excel.
enamored (in-am-erd) *adj.*, 16. Charmed, captivated, inflamed with love.
encomium (en-koh-mee-um) *n.*, 9 High praise.
enervate (en-er-vayt) *v.* 6. To weaken or enfeeble.

creature of the imagination (as the Greek chimera, which was fabled to have the head and body of a lion, the belly of a goat, and the tail of a dragon); a wild or foolish fancy
engender (en-jen-der) *v.* 5 Easily birth to, to produce.
enhance (en-hans) *v.*, 16. To raise, as in value or esteem; to advance, to increase, to heighten.
enigmatic (en-ig-mat-ik) *adj.*, 11 Darkly expressed, obscure, mysterious.
ennui (on-wee) *n.*, 7 Boredom, languor or weariness from lack of interest or employment.
Enoch Arden, *n.*, 14 The hero of a narrative poem (1864) by Alfred Tennyson. Returning home after a long absence, Enoch Arden finds his wife happily married and so he departs without making his identity known, shortly after, he dies of a broken heart.
enthrall (en-thrawl) *v.*, 13 To enslave; hence, to captivate or charm.
ephemeral (uh-*fem*-er-'l) *adj.*, 3 Short-lived.
epicure (ep-ih-kyoor) *n.*, 14 One who believes that pleasure is the highest good; now applied to one who is devoted to the pleasures of the senses, especially to one who delights in fine foods and drink.
epigram (*ep*-ih-gram) *n.*, 9 A concise, pointed saying
epistemology (eh-pis-tuh-*mol*-uh-jee) *n.*, 17 The branch of philosophy that investigates the nature, validity origin, and limits of knowledge.
epitaph (ep-ih-taf) *n.*, 9 An inscription on a monument or tombstone in memory of the dead.
epithet (ep-ih-thet) *n.*, 5 A word expressing some quality of the thing to which it is attached a descriptive name.
epitomize (eh-*pit*-uh-myze) *v.* 5 To shorten or abridge by giving the chief matter.
epochal (*ep*-uh-k'l) *adj.*, 3 Pertaining to or making an epoch, that is, a distinctive period of history
equanimity (eek-wuh-*nim*-ih-tee) *n.*, 12. Evenness of mind, uniformity of temper
equivocal (ih-*kwiv*-uh-k'l) *adj.*, 11 Able to be understood in two or more different senses.
erotic (uh-*rot*-ik) *adj.*, 19 Pertaining to sexual love.
erratic (er-*at*-ik) *adj.*, 19 Irregular, eccentric, wandering
erudite (*ehr*-uh-dyte) *adj.*, 3 Very learned.
eschew (es-*choo*) *v.*, 12. To avoid, shun, flee from.
esoteric (es-uh-*tehr*-ik) *adj.*, 1 Restricted to a small, select group; secret, abstruse.
ethics (*eth*-iks) *n.*, 17 The branch of

concentric (kon-*sen*-trik) *adj.* 5 Having a common center, as circles within each other
concise (kun-*syce*) *adj.* 1. Brief short, succinct.
conclave (*kon*-klayv) *n.*, 3 A meeting of cardinals for the election of a pope; by extension, any secret assembly; private meeting
etymology (et-uh-*mol*-uh-jee) *n.*, 7 The origin and development of a word, or the study of the origin and development of words.
eugenist (yoo-*juh*-nist) *n.*, 16 One who studies or advocates the methods for improving the human race through control of heredity
euthanasia (yoo-thuh-*nay*-zhuh) *n.*, 11 Inducement of painless death to people suffering from incurable or agonizing diseases.
evanescent (eh-vuh-*nes*-ent) *adj.*, 6 Vanishing, enduring only briefly
excoriate (eks-*kor*-ee-ayt) *v.* 11 To flay, to strip the skin off; by extension, to denounce strongly
excruciate (iks-*kroo*-shee-ayt) *v.* 11 To torture, physically or mentally
exculpate (*eks*-k'l-payt) *v.* 20. To free from blame or guilt.
execrable (*eks*-ih-kruh-b'l) *adj.* 9 Detestable, abominable
exigency (*eks*-uh-jun-see) *n.*, 5 A situation or condition requiring urgent action, pressing necessity
exiguous (ig-*zig*-yoo-us) *adj.* 17 Scanty, thin, small.
exorbitant (ig-*zor*-buh-t'nt) *adj.*, 13 Excessive, unreasonable, extravagant (especially in price)
exotic (ig-*zot*-ik) *adj.*, 10. Foreign; hence, having the appeal of the strange and unfamiliar
expatiate (eks-*pay*-shee-ayt) *v.* 5 To atone or make reparation (especially for sin or wrongdoing)
expatriate (eks-*pay*-tree-ayt) *n.*, 5 One who has left a native country to live in another; an exile.
expedient (ek-*spee*-dee-ent) *adj.*, 1 Something that serves to forward any end or purpose, a contrivance or shift.
expiate (*ek*-spee-ayt) *v.* 1 To atone for guilt by suffering
explicit (eks-*plis*-it) *adj.*, 13 Clear, plain, definite.
extemporize (eks-*tem*-puh-ryze) *v.*, 5 To speak without preparation, to improvise.
extenuate (eks-*ten*-yoo-ayt) *v.*, 6 To lessen or diminish, especially applied to an offense.
extricate (*eks*-trih-kayt) *v.* 12. To disentangle, to set free.
extrinsic (eks-*trin*-sik) *adj.* 5 Not contained in or belonging to a thing; external, outward.

F

Fabian (*fay*-bee-'n) *n.*, 16 Belonging to the Fabian Society or adher

time when it could not have existed, etc.

analogy (uh-*nal*-uh jee) *n.,* 9 Resemblance or similarity between two or more things.

anarchic (an-*ark*-ik) *adj* 5 Lawless, chaotic.

anathema (uh-*nath*-uh-muh) [illegible] 13 Curse or denunciation [illegible]

cull, *v.,* 7 To pick out or select—either chosen specimens or parts or inferior ones.

culpable (*kul*-puh-b'l) *adj.,* 6 Deserving blame or censure.

cursory (*ker*-suh ree) *adj.,* 20 Hasty without close attention, superficial.

cynosure (*sy*-noh-shoor) *n.,* 15 Any thing to which attention is strongly attracted or directed, like the pole star by which seamen formerly used to steer

D

dalliance (*dal*-ee-uns) *n.* 15 Dawdling lingering trifling away time; amorous toying

dastardly (*das*-terd-lee) *adj.,* 6 Cowardly mean, sneaking

debacle (deh-*bah*-k'l) *n.,* 11 A sudden flood or rush of waters; by extension, a confused rout.

debauch (dee *bawch*) *n.,* 2 Intemperance, excess in eating or drinking or indulgence in vice.

debilitating (deh *bil* ih tay ting) *adj.,* 17 Weakening or enfeebling

debonair (deb-uh-*nayr*) *adj.,* 5 Good-humored, pleasant, elegant.

decimate (*des*-ih-mayt) *v.,* 8 Literally to destroy a tenth part; by extension, to destroy any large part.

declivity (deh-*kliv*-ih-tee) *n.,* 5 A slope or gradual descent.

decorum (deh-*kor*-um) *n.,* 15 Propriety of speech or behavior

deduction (deh-*duk*-shun) *n.,* 19 Reasoning from the general to the particular from the known principles to the unknown.

defalcation (deh-fal-*kay*-sh'n) *n.,* 9 Breach of trust with regard to money

deferential (def-er-*en*-shul) *adj.,* 16 Yielding to the opinion or judgment of another; respectful or expressing respect.

definitive (deh-*fin*-it-iv) *adj.,* 12. Decisive, final, determinate.

deft, *adj.,* 3 Dexterous, nimble, clever

delectable (deh-*lek*-tuh-b'l) *adj* 10 Highly pleasing

deleterious (del-uh-*tihr*-ee-us) *adj.,* 6 Injurious, destructive, detrimental.

delineate (deh-*lin*-ee-ayt) *v.,* 5 To sketch or design; to draw a likeness in words; to describe, as a character

demagogue (*dem*-uh-gog) *n.,* 1 One who tries to attain power by playing on the prejudices or ignorance of the people, an unprincipled leader or would-be leader

dementia (deh-*men*-shuh) *n.,* 4 A

Hooked or curved, like the beak of an eagle.

arbitrary (*arb*-buh-trehr-ee) *adj.,* 10. Uncontrolled by law or reason tyrannical.

artifact [illegible] *n.,* 3 The world or class of women who have lost status and reputation (as courtesans, for example)

demise (deh-*myze*) *n.,* 3 Death.

demoniacal (dee muh ny uh k'l) *adj.,* 4 Possessed by demons or evil spirits, or behaving as if so possessed.

denizen (*den*-uh-zun) *n.,* 2. A citizen, often a naturalized citizen; more generally any inhabitant or dweller.

denotation (dee-noh-*tay*-shun) *n.,* 9 Signification, meaning

dependency (duh-*pen*-den-see) *n.,* 17 A possession or province, self governing to a large degree, which is not an integral part of the governing country

deprecatory (*dep*-ruh-kuh-tor-ee) *adj.,* 5 Disapproving; loosely apologetic.

derogatory (deh-*rog*-uh-toree) *adj.,* 15 Disparaging belittling

desecrate (*des*-uh-krayt) *v.,* 11. To profane something considered holy or sacred.

desuetude (*des*-wih-tood) *n.,* 5 Disuse or discontinuance of a custom or practice.

desultory (*des*-ul-tor-ee) *adj.,* 20. Leaping from one thing to another without method, aimless.

detergent (deh-*ter*-junt) *n.,* 18 A cleansing agent.

determinate (deh-*ter*-mun-it) *adj.,* 17 Fixed, settled.

determinism (deh-*ter*-muh-niz 'm) *n.,* 6 The theory that man acts in response to forces over which he has no control.

detritus (deh-*try*-tus) *n.,* 5 Any accumulation of earth, sand, gravel, and rock-fragments formed by the wearing away of rocks.

devious (*dee*-vee-us) *adj.,* 5 Roundabout or rambling; by extension, going astray erring not frank or straightforward.

dialectic (dy-uh-*lek*-tik) *n.,* 6 Pertaining to the art of logical argumentation.

Dickensian (Dih-*ken*-zee-'n) *adj.,* 14 Characteristic of the writings of Charles Dickens, English novelist (1812–1870)

diction (*dik*-shun) *n.,* 17 Choice of words distinctness of utterance.

didactic (dy-*dak*-tik) *adj.,* 17 Instructive or inclined to instruct.

dilatory (*dil*-uh-toh-ree) *adj.,* 15 slow tardy delaying

dilute (dih-*loot*) *v.,* 9 To make thinner and weaker as by adding water

disburse (dis-*berss*) *v.,* 19 To pay out.

discreet (dis-*kreet*) *adj* 11 Prudent, careful, not rash.

developed in Italy characterized by excessive ornamentation)

bas-relief (bah-rih-*leef*) *n.,* 4 A [illegible] of [illegible] (dih-in-jen-yoo-us), *adj.,* 12. Not open, candid, frank; artful.

dispersion (dis-*per* zh n) *n.,* 11 The act of scattering or the state of being scattered.

dissemble (dih-*sem*-b'l) *v.,* 12. To disguise hypocritically to hide under a false appearance.

dissident (*dis*-uh-d'nt) *adj.,* 18 Not agreeing dissenting discordant.

dissipate (*dis*-uh-payt) *v.,* 17 To scatter completely; to vanish; to consume or squander.

dissonance (*dis*-uh-n'ns) *n.,* 5 Discord, inharmonious sound; disagreement or incongruity

distraught (dis-*trawt*) *adj.,* 12. Perplexed; distracted, confused.

divergent (duh-*ver*-j nt) *adj.,* 15 Departing or deviating or radiating from something hence, differing or varying

docile (*doss* 'l) *adj.,* 20. Easily instructed or managed.

doctrinaire (dok-trih-*nair*) *n.,* 15 One who positively and confidently propounds opinions or theories.

doldrums (*dol*-dr'mz) *n.,* 2. Low spirits, gloom or listlessness.

dolorous (*dohl*-er-us) *adj.,* 1 Sorrowful.

dominion (duh-*min*-yun) *n.,* 17 A self-governing member-state of the British Commonwealth.

dormant (*dor*-m'nt) *adj.,* 20. Sleeping, inactive, quiescent.

dotage (*doh*-tij) *n.,* 20 Feeble-mindedness in old age.

dour (*door* *dour*) *adj* 2. Sour sullen, gloomy

dowdy (*dow*-dee) *adj.,* 2 Drab, unfashionable, or untidy in dress.

drivel (*driv*-'l) *n.,* 3 Nonsensical or foolish talk.

droll (*drohl*) *adj.,* 8 Odd, comical, laughable.

ductile (*duk*-t'l) *adj.,* 15 Easily drawn out in length, as wire.

dudgeon (*duj*-un) *n.,* 17 Bad humor anger resentment, indignation.

dullard (*dul*-erd) *n.,* 3 A person of slow or dim understanding, a blockhead.

duplicity (doo-*plis*-uh-tee) *n.,* 16 Deceit, double-dealing guile.

duress (*dyoor*-ress; -*ress*) *n.,* 9 Constraint or compulsion, actual or threatened.

dynamic (dy *nam*-ik) *adj.,* 9 Forceful, energetic, capable of exerting power

E

ebullient (eh-*bul*-y'nt) *adj.,* 15 Boiling over effervescent, enthusiastic.

ecclesiastic (uh-klee-zee-*as*-tik) *adj.,* 15 Pertaining to the church.

gregarious (greh-gehr-ee-us) *adj., 11* Fond of company, sociable; having the tendency to herd together, as cattle.

gustatory (gus-tuh-tor-ee) *adj., 11* Relating to the taste (for food); sometimes, tending to please the taste.

H

haggard (hag-erd) *adj., 12* Gaunt, lean, tired in appearance.

haggle (hag-'l) *v. 11* To dispute, bargain, wrangle.

harangue (huh-rang) *n., 7* A long and blustering speech.

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harbinger (hahr-bin-jer) *n., 9* Literally one who goes ahead to arrange for lodging or shelter; by extension, a forerunner or herald.

hauteur (hoe-ter) *n., 7* Disdainful pride, snobbishness, insolent manner.

haven (hay-v'n) *n., 1* A place of safety, a shelter, a harbor.

hegira (heh-jy-ruh) *n., 7* Any flight or exodus for safety, like the flight of Mohammed from Mecca to Medina in A.D. 622.

heinous (hay-nus) *adj., 1* Wicked, hateful, atrocious.

heterogeneous (het-er-oh-jee-nee-us) *adj., 4* Composed of unlike or unrelated parts or elements, confused and contradictory.

hiatus (hy-ay-tus) *n., 15* A gap, opening, or break (as in a manuscript).

hierarchy (hy-er-ahr-kee) *n., 4* A system of rank or order, especially applied to the organization of church government.

hieratic (hy-er-at-ik) *adj., 11* Pertaining to priestly or sacred use.

hireling (hyre-ling) *n., 13* One who serves only for the money he is paid (used in a bad sense); a mercenary.

histrionic (his-tree-on-ik) *adj. 11* Of or relating to the stage or actors; theatrical, artificial, affected.

hoi polloi (hoy puh-loy) *n., 8* Literally the many; the common people, the masses, usually employed contemptuously.

holocaust (hol-uh-kost) *n., 5* A great and widespread destruction, especially (and strictly) by fire.

homage (hom-ij) *n., 12* Reverence, honor, respect; recognition of superiority (fealty).

homeopathic (hoh-mee-oh-path-ik) *adj., 4* Pertaining to the mode of treating diseases by giving drugs capable of producing in healthy persons symptoms like those of the disease of the patient under treatment.

homiletic (hom-ih-let-ik) *adj. 20* Having the nature of a sermon or a moralizing lecture.

homogeneity (hoh-moh-jen-ee-uh-tee) *n., 4* Sameness or similarity of constituent elements, uniformity of structure or substance.

humanist (hyoo-man-ist) *n., 16* One who believes that modern man ought to devote himself to those studies that promote human culture—particularly to those dealing with "the best that has been thought and said" in ancient Greece and Rome.

hybrid (*hy*-brid) *n., 19* Something of mixed origin, as the offspring of different species or varieties.

hyperbole (hy-*per*-buh-lee) *n., 9* Exaggerated statement, made for effect.

hypochondriac (hy poh *kon* dree ak) *n., 20* One who suffers from imaginary diseases or worries excessively about contracting real ones.

hypothetical (hy puh *thet* ih k'l) *adj., 12* Assumed or supposed, perhaps for the sake of argument, perhaps tentatively to account for something not understood.

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iconoclast (eye-*kon*-uh-klast) *n., 11* An image-breaker; one who ridicules accepted and respected beliefs, ideas, institutions and the like.

idiosyncrasy (id-ee-oh-*sin*-kruh-see) *n., 11* Peculiarity of constitution or temperament.

idyl (*eye*-d'l) *n., 16* A poem based on the pleasant rural life, or a scene which might be an appropriate background for such a poem.

ignominy (*ig*-nuh-min-ee) *n., 13* Public disgrace, shame, dishonor.

ilk, *pro.*, and *n., 8* Literally of the same name (as his estate—Balfour of Balfour for example) loosely class, kind, class, sort.

illicit (il-*lis*-it) *adj., 18* Unlawful.

imbibe (im-*byb*e) *v. 10* To drink or suck in, to absorb, receive or admit into the mind.

immaculate (im-*ak*-yoo-lit) *adj. 10* Spotless, pure, untainted.

immanent (*im*-uh-nent) *adj. 19* Indwelling living and working within, inherent.

immolate (*im*-uh-layt) *v. 18* To sacrifice to offer in sacrifice.

impasse (*im*-pass, im-*pass*) *n., 15* A passage open at only one end, a blind alley dead end, hence, a situation that offers no solution.

impeccably (im-*pek*-uh-bly) *adv. 18* In a manner beyond reproach, faultlessly.

impediment (im-*ped*-im-'nt) *n., 13* A hindrance, defect, obstruction.

impertinent (im-*per*-tin-ent) *adj., 11* Disrespectful, impudent; not related or important.

imperturbable (im-per-*terb*-uh-b'l) *adj. 13* Calm, not susceptible to agitation or disquiet.

impious (*im* pee-us) *adj., 1* Irreverent—disrespectful of God and God's laws.

implication (im-plih-*kay*-shun) *n., 11* Something suggested but not expressed directly.

implicit (im-*plis*-it) *adj. 11* Understood or suggested, but not directly stated.

importune (im-por-*tyoon*) *v., 15* To urge or entreat persistently.

imprimatur (im-prim-*ay*-ter) *n., 11* Sanction, approval, or authority especially by the Roman Catholic Church, to publish a book or article.

impute (im-*pyoot*) *v.* To charge, attribute.

inadvertent (in-ad-*ver*-t'nt) *adj. 10* Without forethought, unintentional.

inane (in-*ayn*) *adj., 11* Empty, void of meaning, silly.

incarnate (in-*kahr*-nit) *v. 11* To embody in flesh, to assume human form.

inchoate (in-*koh*-it) *adj. 17* Rudimentary, just begun.

incipient (in-*sip*-ee-ent) *adj., 15* Beginning at an early stage in development.

incisive (in-*sy*-siv) *adj. 16* Sharp, penetrating, acute.

incognito (in-*kog*-nit-oh) *adv. 7* In disguise or concealment.

incommensurate (in-kuh-*men*-shoor-ayt) *adj., 4* Not proportionate nor adequate.

incorrigible (in-*kahr*-ij-ih-b'l) *adj. 10* Not able to be corrected or reformed or amended.

incredulous (in-*kred*-yoo-lus) *adj. 11* Unwilling or unable to believe.

inculcate (in-*kul*-kayt) *v. 19* To teach or impress by insistent repetition.

inculpate (in-*kul*-payt) *v. 19* To incriminate: either to accuse one of crime or to involve in crime.

incunabula (in-kyoo-*nab*-yoo-luh) *n., 20* Early specimens of printing (especially prior to 1500).

indefeasible (in-deh-*fee*-ih-b'l) *adj., 11* Not to be taken away or annulled or undone without consent.

indict (in-*dyte*) *v. 19* To charge with commission of a crime, especially to charge formally.

indigent (*in*-dih-jent) *adj., 19* Poor needy destitute.

indite (in-*dyte*) *v. 19* To write.

induction (in-*duk*-shun) *n., 19* Reasoning from particular facts or individual cases to a general conclusion.

ineffable (in-*ef*-uh-b'l) *adj., 9* Incapable of being uttered, inexpressible.

inept (in-*ept*) *adj., 17* Unfit, unsuitable; awkward, inefficient.

inexorability (in-eks-er-uh-*bil*-ih-tee) *n., 16* Irresponsiveness to prayer or entreaty, inflexibility.

infallibility (in-fal-uh-*bil* ih-tee) *n., 5* Incapacity for error.

ing to its principles and methods, that is, the gradual attainment of socialism through education and reform.

facetious (fuh *see*-shus) *adj., 8* Jocular especially at an inappropriate time or place

factious (*fak* shus) *adj., 19* Characterized by or causing dissension opposing clashing contentious.

factitious (fak-*tih*-shus) *adj., 8* Not natural or genuine, artificial.

fallacious (fuh-*lay*-shus) *adj 15* Not well founded, deceiving producing error

fallow (*fal*-oh) *adj., 4* Land ploughed but not seeded for the season.

farcical (*fahrs*-ih-kal) *adj., 3* Absurd ludicrous.

fastidious (fass-*tid*-ee-us) *adj., 11* Difficult to please, over-nice or particular highly critical.

fatuous (*fat*-choo-us) *adj., 9* Defective in intelligence, complacently stupid, inane, silly

feasible (*feez*-uh-b'l) *adj., 18* Able to be accomplished; practicable.

fecund (*fee* kund, *fek*-und) *adj., 20* Fruitful prolific.

feline (*fee* lyne) *adj., 9* Cat-like.

felony (*fel*-uh-nee) *n., 9* A major crime.

ferret (*fehr*-it) *v 4* To find or search out or investigate thoroughly like a ferret (a variety of weasel)

fetid (*fet* id) *adj., 15* Smelling offensive, stinking

fetish (*fet*-ish) *n., 15* An object to which a magic potency is ascribed; an object valued unreasonably and excessively· an object which, though non-sexual itself arouses sexual feelings because of private associations.

fettle (*fet* 'l) *n., 17* Condition trim.

fiasco (fee-*ass*-koh) *n., 3* An utter or ridiculous failure

fillip (*fil*-ip) *n., 4* *Something that stirs up to action, a stimulant.*

fin de siècle, (*fahn*-duh *syeh*-kl) *n., 7* *Literally "end of the century" used to connote the decadence allegedly characteristic of the end of the 19th century*

finesse (fin-*ess*) *n., 19* Adroitness, especially in handling difficult situations; cunning artfulness, craft.

finical (*fin*-ih-k'l) *adj 11* Affectedly precise in trifles.

flaccid (*flak*-sid) *adj., 2* Flabby soft, weak.

flagitious (fluh-*jish*-us) *adj., 19* Grossly wicked, heinous, villainous.

flagrant (*flay*-grunt) *adj., 15* Very bad or wrong notorious, glaring

flamboyant (flam-*boy*-unt) *adj., 7* Ornate, showy exaggerated—like French Gothic architecture of the 15th and 16th centuries.

flay *v 2* To strip the skin off an animal or a person, as by whipping; to criticize or censure mercilessly

florid (*flor* id) *adj., 15* Ruddy highly colored showy gaudy

flotsam (*flot*-sum) *n., 17* Goods lost in shipwreck and found floating

flux, *n., 8* Any flow or continuous movement.

foible (*foy*-b'l) *n., 9* A weak point, failing infirmity in character or personality

fop *n., 11* Someone over-nice and affected in dress, speech, or behavior

foray (*for* ay) *n., 20* A sudden raid, as in border warfare.

foreshorten, *v., 6* In painting to represent objects, or the lines of objects, as shorter than they really are, in order to create the illusion that they are relatively of proper size (in conformity with the principles of perspective)

forthright (*forth-ryte*) *adj., 12.* Direct, frank, *coming straight to the* point.

fortuitous (for *tyoo*-ih-tus) *adj., 18* Happening by chance; casual.

fossilize (*foss* 'l-yze) *v 7* To petrify; to make antiquated.

fractious (*frak*-shus) *adj., 12* Quarrelsome, unruly rebellious.

fresco (*fress*-koh) *n., 7* The art of painting on fresh or damp plaster with water colors, or the painting so accomplished

fulminate (*ful*-muh-nayt) *v., 13* To denounce violently

fulsome (*ful*-sum) *adj., 16* Offensive, nauseous; especially applied to flattery fawning or obsequious behavior

furtive (*fur*-tiv) *adj., 12.* Stealthy shifty

fustian (*fuss*-chun) *n., 20* An inflated kind of writing or speaking absurd pomposity

G

gadfly (*gad* fly) *n., 2.* The fly that goads or stings cattle· by extension, one who annoys others or who pricks their complacency

Gallicize (*gal*-ih-syze) *v., 7* To make or become French, or like the French.

gamut (*gam*-uht) *n., 18* Literally the entire series, from first to last, of recognized musical notes; by extension, the whole range of anything

gargantuan (gahr-*gan*- boo-uhn) *adj., 14* Like Gargantua, the giant king in the *Gargantua and Pantagruel* (1552) of Rabelais; huge, prodigious.

garrulity (guh-*rool*-uh-tee) *n., 16* Talkativeness.

gasconade (gass-kuh-*nayd*) *n., 14* Boasting, blustering—like the natives of Gascony in France, who were allegedly great braggarts.

generic (juh-*nehr*-ik) *adj 8* Inclusive, general, pertaining to a class or group.

genetic (juh-*net*-ik) *adj., 8* Pertaining to the origin of a thing

genocide (*jen*-uh-syde) *n., 18* Calculated measures to wipe out a people, a race, or a cultural group.

genre (*zhahn*-ruh) *n 9* A type, especially applied to works of literature and art; genre painting that is, the realistic depiction of everyday subjects.

genteel (jen-*teel*) *adj., 7* Refined, polite, now generally connoting excessively refined.

germane (jer-*mayn*) *adj 13* Closely related, appropriate, relevant.

gerrymander (*gehr* ee man der, *jehr*) *v., 15* To redistrict a voting area so that one party receives an undue or unfair advantage.

gestation (jess-*tay*-shun) *n., 10.* The act or period of carrying the young in the uterus from conception to birth, pregnancy· by extension, any period during which an idea, plan, scheme, or the like is developing.

gingerly (*jin*-jer-lee) *adv 20.* Cautiously carefully, delicately and timidly

girth, *n., 11* The circumference or round measurement of timber animals, and sometimes (usually humor ously) of people.

glabrous (*glay*-brus) *adj., 11* Smooth, devoid of hair, bald.

glib *adj., 3* Smooth-tongued, suspiciously fluent, facile in speech.

glower (*glow*-er) *v 12.* To frown, scowl.

goldbrick, *n., 10.* A gilded metal bar of brick; hence· anything worthless but passed off as valuable; in soldier's talk, one who tries to evade duty

Gordian (*Gor*-dee-uhn) **knot**, *n., 14* An apparently unsolvable problem—like the knot so skilfully tied by the Phrygean king Gordius that its ends could not be discovered. (Alexander cut it through with his sword thus *to cut the Gordian knot* means to overcome a difficulty boldly)

gourmand (*goor*-mand) *n., 11* A glutton; often loosely used to apply to a connoisseur of food and wine.

gourmet (*goor*-may) *n., 11* A connoisseur of food and wine, an epicure

graphic (*graf*-ik) *adj 4 Lifelike,* vivid, calling forth a distinct image.

gratuitous (gruh-*too*-ih-tus) *adj., 18* Without reasonable grounds.

gratuity (gruh-*too*-ih-tee) *n., 6* A present, donation, tip.

gravid (*grav*-id) *adj., 10 Heavy with child, pregnant.*

greenhorn (*green*-horn) *n., 10* An inexperienced person, a recently arrived immigrant (colloquial and generally humorous)

greenroom, *n 10.* The room to which actors may retire between scenes or when off stage.

gregarious (gruh-gair-ee-us) *adj.*, *13.* fond of company sociable; having the tendency to herd together, as cattle.
gustatory (gus-tuh-tor-ee) *adj.*, *11* Relating to the taste (for food); gustatory, tending to please the taste.

H

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haven (hay-v n) *n.*, *1* A place of safety a shelter, a harbor.
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heinous (*hay*-nus) *adj.*, *1.* Wicked, hateful, atrocious.
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hoi polloi (hoy puh-*loy*) *n.*, *5* Literally the many; the common people, the masses, usually employed contemptuously.
holocaust (*hol*-uh-kost) *n.*, *1* A great and widespread destruction, especially (and usually) by fire.
homage (*hom*-ij) *n.*, *12.* Reverence, honor, respect, recognition of superiority, fealty.
homeopathic (hoh-mee-oh-*path*-ik) *adj.*, *4.* Pertaining to the mode of treating diseases by giving drugs capable of producing in healthy persons symptoms like those of the disease of the patient under treatment.
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ignominy (*ig*-nuh-min-ee) *n.*, *11* Public disgrace, shame, dishonor.
ilk, *pro*, and *n.*, *5* Literally of the same name (as his name—Balfour of Balfour for example); loosely clan, kind, class, sort.
illicit (il-*lis*-it) *adj.*, *11* Unlawful.
imbibe (im-*bybe*) *v.* *10* To drink or suck in; to absorb, receive or admit into the mind.
immaculate (im-*ak*-yoo-lit) *adj* *10.* Spotless, pure, untainted.
immanent (*im*-uh-nent) *adj.*, *19* Indwelling living and working within, inherent.
immolate (*im*-uh-layt) *v.* *11* To sacrifice; to offer as sacrifice.
impasse (*im*-pass, im-*pass*) *n.*, *11.* A passage open at only one end, a blind alley dead end, hence, a situation that offers no solution.
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importune (im-por-*tyoon*) *v.*, *11* To urge or entreat persistently
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greenhorn (*green*-horn) *n.*, *10*. An inexperienced person; a recently arrived immigrant (colloquial and generally humorous)

greenroom, *n* *10*. The room to which actors may retire between scenes or when off stage.

gregarious (greh-gair-ee-us) *adj.*, 13 Fond of company; sociable; having the tendency to herd together, as cattle.

gustatory (gus-tah-tor-ee) *adj.*, 11 Relating to the taste (for food); savorous, tending to please the taste.

H

haggard (hag-erd) *adj.*, 12 Gaunt, lean, tired in appearance.

haggle (hag'l) *v.*, 11 To dispute, bargain, wrangle.

harangue (hah-rang) *n.*, 7 A long and blustering speech.

harass (har-us, hah-rass) *v.*, 12 To trouble, torment, or annoy as by incessant petty attacks.

harbinger (hahr-bin-jer) *n.*, 9 Literally one who goes ahead to arrange for lodging or shelter; by extension, a forerunner or herald.

hauteur (hoe-ter) *n.*, 7 Disdainful pride, snobbishness, insolent manner.

haven (hay-v'n) *n.*, 1 A place of safety, a shelter, a harbor.

hegira (heh-jy-rah) *n.*, 7 Any flight or exodus for safety, like the flight of Mohammed from Mecca to Medina in A.D. 622.

heinous (hay-nus) *adj.*, 1 Wicked, hateful, atrocious.

heterogeneous (het-er-oh-jee-nee-us) *adj.*, 4 Composed of unlike or unrelated parts or elements, confused and contradictory.

hiatus (hy-ay-tus) *n.*, 11 A gap, opening, or break (as in a manuscript).

hierarchy (hy-er-ahr-kee) *n.*, 3 A system of rank or order, especially applied to the organization of church government.

hieratic (hy-er-at-ik) *adj.*, 11 Pertaining to priestly or sacred use.

hireling (hyre-ling) *n.*, 15 One who serves only for the money he is paid (used in a bad sense); a mercenary.

histrionic (his-tree-on-ik) *adj.*, 16 Of or relating to the stage or actors; theatrical, artificial, affected.

hoi polloi (hoy puh-loy) *n.*, 8 Literally the many; the common people, the masses, usually employed contemptuously.

holocaust (hol-oh-kost) *n.*, 1 A great and widespread destruction, especially (and strictly) by fire.

homage (hom-ij) *n.*, 12 Reverence, honor, respect, recognition of superiority, fealty.

homeopathic (hoh-mee-oh-path-ik) *adj.*, 4 Pertaining to the mode of treating disease by giving drugs capable of producing in healthy persons symptoms like those of the disease of the patient under treatment.

homiletic (hom-ih-let-ik) *adj.*, 20 Having the nature of a sermon or a moralizing lecture.

homogeneity (hoh-moh-jen-ee-ih-tee) *n.*, 4 Sameness or similarity of constituent elements, uniformity of structure or substance.

humanist (hyoo-man-ist) *n.*, 16 One who believes that modern man ought to devote himself to those studies that promote human culture—particularly to those dealing with "the best that has been thought and said" in ancient Greece and Rome.

hybrid (hy-brid) *n.*, 13 Something of mixed origin, as the offspring of different species or varieties.

hyperbole (hy-per-boh-lee) *n.*, 9 Exaggerated statement, made for effect.

hypochondriac (hy-poh-kon-dree-ak) *n.*, 23 One who suffers from imaginary diseases or worries excessively about contracting real ones.

hypothetical (hy-poh-thet-ih-k'l) *adj.*, 1 Assumed or supposed, perhaps for the sake of argument, perhaps tentatively to account for something not understood.

I

iconoclast (eye-kon-oh-klast) *n.*, 11 An image-breaker, one who ridicules accepted and respected beliefs, ideas, institutions and the like.

idiosyncrasy (id-ee-oh-sin-krah-see) *n.*, 11 Peculiarity of constitution or temperament.

idyl (eye-d'l) *n.*, 11 A poem based on the pleasant rural life, or a scene which might be an appropriate background for such a poem.

ignominy (ig-noh-min-ee) *n.*, 11 Public disgrace, shame, dishonor.

ilk, *pro.* and *n.*, 8 Literally of the same name (as his estate—Balfour of Balfour for example), loosely class, kind, clan, sort.

illicit (il-lis-it) *adj.*, 11 Unlawful.

imbibe (im-byke) *v.*, 13 To drink or suck in; to absorb, receive or admit into the mind.

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ingenious (in-*jeen* yus) *adj.*, *4* Clever inventive, skilful.
ingenuous (in *jen* yoo-us) *adj.*, *4* Frank, open, candid.
ingratiate (in *gray*-shee-ayt) *v.*, *2* To bring oneself into another's favor to secure another's goodwill.
inherent (in-*heer* nt) *adj* *17* Natural, basic, inborn, contained within.
iniquity (in-*ik* wu-ee) *n* *20* A wicked, unjust, or criminal act.
injunction (in *junk*-sh n) *n.*, *16* A command, order or urgent advice.
innocuous (in-*ok yoo-us*), *adj.*, *12* Harmless.
inordinate (in-*ord*-in-it) *adj.*, *20* Without moderation, excessive.
insensate (in-*sen*-sat) *adj* *1* Devoid of sense, reason, or feeling
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infraction (in *frak*-shun) *n.*, *12* Violation, breach.
ingenious (in *jeen*-yus) *adj.*, *4* Clever, inventive, skilful.
ingenuous (in *jen* yoo-us) *adj.*, *4* Frank, open, candid.
ingratiate (in-*gray*-shee-ayt) *v.*, *2* To bring oneself into another's favor to secure another's goodwill.
inherent (in-*heer* nt) *adj* *17* Natural, basic, inborn, contained within.
iniquity (in-*ik* wit-ee) *n.*, *20* A wicked, unjust, or criminal act.
injunction (in-*junk*-sh n) *n.*, *16* A command, order or urgent advice.
innocuous (in-*ok* yoo-us) *adj.*, *12* Harmless.
inordinate (in-*ord*-in-it) *adj.*, *20* Without moderation, excessive.
insensate (in-*sen*-sat) *adj.*, *1* Devoid of sense, reason, or feeling
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moroseness (muh-*rohss*-ness) *n.*, *16* Sullenness, sourness, gloom.

mountebank (*mown*-tuh-bank) *n.*, *13* A false or boastful pretender a quack.

Mrs. Grundy, *n.*, *14* Prudish, narrow minded censorship, like that supposed to be exercised by *Mrs. Grundy* a character in *Thomas* Morton s play *Speed the Plough* (1798)

mugwump, *n.*, *1* An independent, especially in politics.

mundane (mun-*dayn*) *adj.*, *18* Belonging to the world earthly

Muse (*myooz*) *n.*, *2* One of the nine goddesses who, in Greek mythology presided over learning poetry art.

myriad (*mihr*-ee-ud) *n.*, *20* Literally 10,000- usually any very large number

Myrmidon (*mer*-muh-don, -d'n) *n.*, *14* A follower who executes the commands of his leader (usually an unprincipled leader) without scruple.

mystic (*miss*-tik) *n.*, *16* One who believes that through intuition, ecstasy or spiritual contemplation man can have a direct and immediate consciousness of Divine Presence or of ultimate reality

myth (*mihth*) *n.*, *17* An explanation, generally in story form, for origins, institutions, and practices that otherwise would remain mysterious.

N

nabob (*nay*-bob) *n.*, 7 A very wealthy man.

nadir (*nay*-der) *n.*, 7 The lowest point, opposed to *zenith*

narcissistic (nahr-suh *sis*-tik) *adj.*, *19* Characterized by inordinate self love- excessively interested in one s self, appearance, comfort, and the like

nebulous (*neb*-yoo-luss) *adj.*, *16* Cloudy misty vague.

necromancer (*nek*-ruh-man-ser) *n.*, *6* A conjurer magician, wizard; one who allegedly communicates with the dead.

negative (*neg*-uh-tiv) *v.*, *12*. To deny refuse, or prohibit.

nemesis (*nem*-uh-sis) *n.*, *14* Retributive justice (after the Greek avenging deity)

neologism (nee-*ol*-og jizm) *n.*, *15* A new word or phrase.

neophyte (*nee*-oh fyte) *n.*, *1* A beginner

nether (*neth*-er) *adj.*, *1* Lying beneath, opposed to *upper*

niggardly (*nig*-erd-lee) *adj* 2 Miserly meanly sparing of expense.

nihilism (*ny*-ul izm) *n.*, *6* The principles of a Russian terrorist group of the 19th century who held that all social institutions must be destroyed to clear the way for a new society

noisome (*noy*-sum) *adj.*, *4* Unwholesome, injurious, stinking

nominative (*nom*-in-uh-tiv) *n.*, *9* The subject, or the case of the subject.

nonce (*nonss*) *n.*, *3* Present or single purpose or occasion.

nostrum (*noss*-trum) *n.*, *20* A quack remedy

nouveau riche (*noo*-voh *reesh*) *n.*, 7 Literally newly rich one who has only recently become wealthy

noxious (*nok*-shus) *adj.*, *12*. Unwholesome, harmful to health or morals.

nuance (*noo*-ahnss) *n.*, *4* A shade of color emphasis, meaning feeling or the like.

nugatory (*noo*-guh-tor-ee) *adj.*, *8* Worthless, trifling

O

obdurate (*ob*-dyoo-rit) *adj.*, *3* Obstinate; impenitent.

objurgate (*ob*-jer-gayt) *v.*, *4* To reproach or upbraid violently

obsequies (*ob*-seh-kweez) *n* *19* Funeral rites.

obsequiousness (ob-*see* kwee-us-ness) *n.*, *16* Servilely submissive or deferential.

obsolescent (ob-suh-*less*-unt) *adj.*, *9* Going out of use.

obtrusive (ob-*troo*-siv) *adj.*, *16* Thrusting or pushing one s self where not invited or wanted.

obtuse (ob-*toos* ob-*tyoos*) *adj.*, *15* Blunt or dull of understanding

officious (uh-*fish*-us) *adj.*, *11* Unduly forward in tendering services.

oligarch (*ol*-ih-gahrk) *n.*, *20* One of the rulers in a state controlled by only a few men.

omega (oh-*mee*-guh) *n.*, *9* The last letter in the Greek alphabet; hence, the last or end of something

omnipotent (om-*nip*-uh-t'nt) *adj.*, *1* All-powerful.

omniscient (om-*nish*-'nt) *adj.*, *1* All-knowing

onerous (*ob*-ner-us) *adj* *9* Burdensome, oppressive.

onomatopoeia (on uh mat uh *pee* yuh) *n.*, *18* Formation of words in imitation of sounds.

ontology (on-*tol*-uh-jee) *n.*, *17* The branch of philosophy that investigates the nature and principles of being

opportune (op-er-*toon*) *adj.*, *13* Well-timed, appropriate.

opprobrious (uh-*proh*-bree-us) *adj.*, *13* Offensive, shameful, infamous.

oppugnant (uh-*pug*-nuhnt) *adj.*, *12*. Antagonistic, contrary

organic (or-*gan*-ik) *adj.*, *11* Pertaining to living organisms (plant and animal); structural, constitutional.

orgiastic (or-ji-*as*-tik) *adj.*, *11* Pertaining to wild, drunken, or licentious revelries.

orison (*awr*-i-z'n, *or*-i-z'n) *n.*, *4* Prayer or supplication.

orthography (or-*thog*-ruh-fee) *n.*, *11* Correct spelling

ossify (*oss*-ih-fy) *v.*, *9* To turn into bone, or a substance like bone.

ostensible (oss-*ten*-sih-b'l) *adj* *1* Apparent, manifest, avowed (opposed to *real*)

ostracize (*oss*-truh-size) *v.*, *13* To banish to exclude from participation, company society and the like.

overt (oh-*vert*) *adj.*, *4* Apparent, manifest, open to view

ovoid (*oh*-void) *adj.*, *4* Egg-shaped.

P

paean (*pee*-uhn) *n.*, *8* A song of triumph, praise, thanksgiving

paganism (*pay*-g n-izm), *n.*, *6* The worship of false gods or of no gods at all; heathenism.

palatal (*pal*-i-t'l) *adj* *6* A sound made with the tongue held close to the palate, or roof of the mouth.

palette (*pal*-et) *n.*, *11* The thin oval or oblong flat piece of wood on which the painter lays his colors.

pallet (*pal*-it) *n.*, *11* A small and humble bed.

palpable (*pal*-puh-b'l) *adj.*, *4* Easily perceived (as an error) obvious.

palpitate (*pal*-pih-tayt) *v.*, *4* To beat violently as the heart after bodily exertion, to flutter, pant, or throb.

pandemonium (pan-duh-*moh*-nee-um) *n.*, *3* The temple or abode of all the demons, hence, wild uproar

pander (*pan*-der) *v.*, *14* To minister to the passions or prejudices of others, generally for selfish ends- to cater or serve basely

parabolical (pair-uh-*bol*-ih-k'l) *adj.*, *5* Expressed through parable, that is, a short narrative conveying a moral lesson.

paradox (*par*-uh-doks) *n.*, *9* A contradictory statement—either seemingly or really contradictory

paragon (*par*-uh-gon) *n.*, *8* A model of excellence.

paramour (*par*-uh-moor) *n.*, *3* A lover used in an uncomplimentary sense.

paranoiac (par-uh-*noy*-ak) *n* *5* One suffering from a mental disorder characterized by systematized delusions, usually of persecution.

paraphrase (*par*-uh-frayz) *n.*, *1* A loose or free translation, usually in ampler terms and shorter compass.

parasite (*par*-uh-syte) *n.*, *13* A plant or animal who lives in or on another; a person who lives on the hospitality or patronage of others without making any return.

paresis (puh-*ree*-sis) *n.*, *20* Incomplete paralysis affecting movement but not sensation.

pariah (puh-*ry*-uh) *n* 7 An outcast, one despised by society

rity (par-ih-tee) *n.*, *6* Equality; similarity or analogy.

parody (*par*-ah-dee) *n.*, *9* An alteration of verses or words of a serious composition in order to burlesque it.

parse *v.* *4* To resolve a sentence into its elements, to name the parts of speech in a sentence and tell their relation to one another.

parsimonious (pahr-sih-*moh*-nee-us) *adj.*, *4* Excessive frugality in expenditure.

passive (*pas*-iv) *adj.*, *11* Submissive, enduring without resisting.

patent (*pa*-tnt, *pay*-tnt) *adj.* *11* Plain, evident, open.

paternalism (pah-*ter*-nl-izm) *n.* *6* The practice by a company, organization, or state of treating its employees, its members, or its citizens as a father treats his children.

pathos (*pay*-thos) *n.*, *11* The quality in life, art or literature that awakens tenderness and sympathy.

patriarch (*pay*-tree-ark) *n.*, *12* A venerable old man; the head or founder of a tribe; a church dignitary.

paucity (*paw*-sih-tee) *n.*, *11* Scarcity or fewness.

peccadillo (pek-ah-*dil*-oh) *n.*, *7* A petty offense.

pecuniary (pih-*kyoo*-nee-er-ee) *adj.*, *2* Pertaining to money.

pedigree (*ped*-ih-gree) *n.*, *8* Line of descent.

penchant (*pen*-chent) *n.*, *8* Inclination or preference.

pensive (*pen*-siv) *adj.*, *11* Weighing or considering in melancholy fashion; thoughtful and sad.

peregrination (pehr-eh-grih-*nay*-shen) *n.*, *11* A wandering from place to place, journey (especially abroad).

peremptory (per-*emp*-tor-ee) *adj.*, *1* Shutting out debate, positive, final.

perfidious (per-*fid*-ee-uhs) *adj.* *11* False to trust or confidence, treacherous, faithless.

perfunctory (per-*funk*-tor-ee) *adj.*, *11* Careless, superficial, indifferent.

periphery (peh-*rif*-er-ee) *n.* *11* Circumference, perimeter, edge, outer limit.

periphrasis (peh-*rif*-rah-sis) *n.*, *11* A roundabout or indirect way of speaking, circumlocution, the use of more words than are necessary.

peroration (pehr-or-*ay*-shen) *n.*, *6* The concluding part of a formal speech or oration.

personification (per-son-ih-fih-*kay*-shen) *n.*, *9* Investing things or ideas with the characteristics of human beings.

perspicuity (per-spih-*kyoo*-ih-tee) *n.*, *1* Easy understandability, plainness, lucidity, distinctness.

peruse (peh-*roos*) *v.*, *20*. To read, especially to read with care and attention.

pettifogger *n.*, *11* One who practices petty trickery, especially a lawyer who does.

petulance (*pech*-oo-lens) *n.*, *11* Irritation or ill-humor, especially stemming from trivial causes.

pharisaicalness (far-ih-*say*-ih-kl-ness) *n.* *11* Seeming righteousness, hypocritical morality.

Philistine (*fih*-lis-teen) *n.*, *[illegible]* One who lacks interest in, or is indifferent to art, literature, and culture generally.

philippic (fih-*lip*-ik) *n.*, *11* A discourse or speech full of invective, as Demosthenes' orations against Philip of Macedonia.

phlegmatic (fleg-*mat*-ik) *adj.* *11* Dull, sluggish, not easily excited to passion or action.

picayune (pik-ih-*yoon*) *n.*, *21* Something or someone insignificant.

Pickwickian (*pik*-wik-ee-en) *adj.* *11* Characteristic of Mr. Pickwick, hero of Charles Dickens' *Pickwick Papers* (1836).

pillage (*pil*-ij) *n.* *1* Plunder, spoil, booty.

piquant (*pee*-kent) *adj.* *11* Agreeably sharp or tart; provocative, stimulating.

plagiary (*play*-jih-ree) *n.* *11* The act of passing off another man's writing as one's own.

Platonic (plah-*ton*-ik) *adj.* *11* Pertaining to Plato (427-347 B.C.) or his philosophy, especially to his idealism.

plausible (*plaw*-zih-bl) *adj.* *3* Reasonable, fair, credible—at least superficially.

pleonasm (*plee*-oh-nazm) *n.* *11* The use of more words than necessary; words whose omission leaves the idea intact.

plethoric (pleh-*thor*-ik) *adj.* *11* Having an excess, overfull.

poignant (*poyn*-yent) *adj.*, *11* Distressing, painful, piercing, keenly or sharply appealing.

polyandry (pol-ee-*an*-dree) *n.*, *19* The practice of a woman having more than one husband at a time.

polyglot (*pol*-ee-glot) *n.*, *19* One who knows several languages.

portentous (pawr-*ten*-tuhs) *adj.*, *11* In a manner that indicates something is about to happen, especially something momentous—occasionally something calamitous, ominous.

posthumous (*pos*-choo-mus) *adj.* *11* Taking place after one's death, used especially with reference to a child born after his father's death or a book published after its author's death.

potential (po-*ten*-shl) *adj.* *9* Possible, in contrast to *actual*: not existing but capable of existing.

potpourri (poh-*poo*-ree) *n.*, *7* A mixture of various ingredients, a medley, a miscellany.

pragmatic (prag-*mat*-ik) *adj.* *11* Pertaining to the [illegible] in practice or [illegible]

precious (*presh*-us) *adj.* *11* [illegible] [illegible] [illegible] [illegible] in language or behavior.

precipitate [illegible] *v.* *11* To [illegible] [illegible] [illegible]

precipitous (pre-*sip*-ih-tus) *adj.* *11* Very steep.

preclude (pre-*klood*) *v.* *11* To shut off or prevent [illegible]

precocious (pre-*koh*-shus) *adj.* *11* Developing early, especially in mental powers.

precursor (pre-*ker*-ser) [illegible] Something or someone that precedes an event, especially [illegible] or [illegible] forerunner.

predatory (*pred*-ah-tor-ee) *adj.* Plundering, [illegible]

predilection (pre-dih-*lek*-shen) *n.* *1* [illegible] [illegible] [illegible] preference [illegible] from one's temperament, character or experience.

preponderant (pre-*pon*-der-ent) *adj.* *11* Greater in [illegible] [illegible] [illegible] [illegible]

primal (*pry*-ml) *adj.* *1* First in order of time, original.

procrastinate (pro-*kras*-tih-nayt) *v.* *11* To put off, [illegible] [illegible] delay.

proclivity (pro-*kliv*-ih-tee) *n.* *11* Bent, proneness, tendency, inclination.

Procrustean (proh-*krus*-tee-en) *adj.* *11* Pertaining to Procrustes, a highwayman of ancient Greece who tortured his victims by placing them on an iron bed and stretching them to its length by stretching their bodies or lopping off their limbs; hence, ruthlessly fitting something into a preconceived form regardless of the consequent distortion.

prodigy (*prod*-ih-jee) *n.*, *1* Someone or something that excites wonder or admiration.

profaning (proh-*fayn*-ing, proh-*fayn*-ing) *adj.* *11* Debasing or desecrating something, treating something religious irreverently or impurely.

progeny (*proj*-eh-nee) *n.*, *11* Offspring, descendants.

proliferation, *n.* *11* Growth by rapid reproduction of new parts, as by budding.

prolific (proh-*lif*-ik) *adj.*, *11* Producing young or fruit (and, by extension, other things as well) in abundance; fruitful, productive.

prolix (*proh*-liks, proh-*liks*) *adj.* *3* Long-winded, diffuse, verbose.

promiscuous (proh-*mis*-kyoo-us) *adj.* *11* Mixing unlike things unselectively; indiscriminating or casual, especially with regard to sexual relations.

promulgate (proh-*mul*-gayt) *v.* *1* To make known by open declaration; to publish or proclaim.

moroseness (muh-*rohss*-ness) *n., 16* Sullenness, sourness, gloom.
mountebank (*mount*-tuh-bank) *n., 13* A false or boastful pretender a quack.
Mrs. Grundy *n., 14* Prudish, narrow minded censorship like that supposed to be exercised by Mrs. Grundy a character in Thomas Morton's play *Speed the Plough* (1798)
mugwump *n., 1* An independent, especially in politics.
mundane (mun-*dayn*) *adj., 18* Belonging to the world earthly
Muse (*myooz*) *n., 2* One of the nine goddesses who, in Greek mythology presided over learning poetry, art.
myriad (*mihr*-ee-ud) *n., 20* Literally 10,000- usually any very large number
Myrmidon (*mer* muh-don, -d'n) *n., 14* A follower who executes the commands of his leader (usually an unprincipled leader) without scruple.
mystic (*miss*-tik) *n., 16* One who believes that through intuition, ecstasy or spiritual contemplation man can have a direct and immediate consciousness of Divine Presence or of ultimate reality
myth (*mith*) *n., 17* An explanation, generally in story form, for origins, institutions, and practices that otherwise would remain mysterious.

N

nabob (*nay*-bob) *n., 7* A very wealthy man.
nadir (*nay*-der) *n 7* The lowest point, opposed to *zenith*
narcissistic (nahr-suh *sis*-tik) *adj., 19* Characterized by inordinate self love; excessively interested in one's self appearance, comfort, and the like.
nebulous (*neb*-yoo-luss) *adj., 16* Cloudy misty vague.
necromancer (*nek*-ruh-man-ser) *n., 6* A conjurer magician, wizard; one who allegedly communicates with the dead.
negative (*neg*-uh-tiv) *v., 12* To deny refuse, or prohibit.
nemesis (*nem*-uh-sis) *n., 14* Retributive justice (*after the Greek avenging deity*)
neologism (nee-*ol*-og jizm) *n., 15* A new word or phrase.
neophyte (*nee*-oh-fyte) *n., 1* A beginner
nether (*neth*-er) *adj 1* Lying beneath, opposed to *upper*
niggardly (*nig*-erd-lee) *adj 2*. Miserly meanly sparing of expense.
nihilism (*ny*-ul-izm) *n 6* The principles of a Russian terrorist group of the 19th century who held that all social institutions must be destroyed to clear the way for a new society
noisome (*noy*-sum) *adj., 4* Unwholesome, injurious, stinking
nominative (*nom*-in-uh-tiv) *n., 9* The subject, or the case of the subject
nonce (*nonss*) *n., 3* Present or single purpose or occasion.
nostrum (*noss*-trum) *n., 20* A quack remedy
nouveau riche (*noo*-voh *reesh*) *n., 7* Literally newly rich one who has only recently become wealthy
noxious (*nok*-shus) *adj., 12* Unwholesome, harmful to health or morals.
nuance (*noo*-ahnss) *n., 4* A shade of color emphasis, meaning feeling or the like.
nugatory (*noo*-guh-tor-ee) *adj., 8* Worthless, trifling

O

obdurate (*ob*-dyoo-rit) *adj., 3* Obstinate; impenitent.
objurgate (*ob*-jer-gayt) *v., 4* To reproach or upbraid violently
obsequies (*ob*-seh-kweez) *n 19* Funeral rites.
obsequiousness (ob-*see*-kwee-us-ness) *n., 16* Servilely submissive or deferential.
obsolescent (ob-suh-*less*-unt) *adj 9* Going out of use.
obtrusive (ob-*troo*-siv) *adj., 16* Thrusting or pushing one's self where not invited or wanted
obtuse (ob-*toos* ob-*tyoos*) *adj., 15* Blunt or dull of understanding
officious (uh-*fish*-us) *adj., 11* Unduly forward in tendering services.
oligarch (*ol*-ih-gahrk) *n., 20* One of the rulers in a state controlled by only a few men.
omega (oh-*mee*-guh) *n., 9* The last letter in the Greek alphabet; hence, the last or end of something
omnipotent (om-*nip*-uh-t'nt) *adj., 1* All-powerful.
omniscient (om-*nish*-'nt) *adj 1* All knowing
onerous (*ob*-ner-us) *adj., 9* Burdensome, oppressive.
onomatopoeia (on uh mat uh *pee* yuh) *n., 18* Formation of words in imitation of sounds.
ontology (on-*tol*-uh-jee) *n., 17* The branch of philosophy that investigates the nature and principles of being
opportune (op-er-*toon*) *adj., 13* Well-timed, appropriate.
opprobrious (uh-*prob*-bree-us) *adj., 13* Offensive, shameful, infamous.
oppugnant (uh-*pug*-nuhnt) *adj., 12* Antagonistic, contrary
organic (or-*gan*-ik) *adj., 11* Pertaining to living organisms (plant and animal); structural, constitutional.
orgiastic (or-ji-*as*-tik) *adj., 11* Pertaining to wild, drunken, or licentious revelries.
orison (*awr*-i-z'n, *or*-i-z'n) *n., 4* Prayer or supplication.
orthography (or-*thog*-ruh-fee) *n 11* Correct spelling
ossify (*oss*-ih-fy) *v 9* To turn into bone, or a substance like bone.
ostensible (oss-*ten*-sih-b'l) *adj., 1* Apparent, manifest, avowed (opposed to *real*)
ostracize (*oss*-truh-size) *v., 13* To banish; to exclude from participation, company society and the like.
overt (oh-*vert*) *adj., 4* Apparent, manifest, open to view
ovoid (*ob*-void) *adj., 4* Egg-shaped.

P

paean (*pee*-uhn) *n., 8* A song of triumph, praise, thanksgiving
paganism (*pay*-g'n-izm), *n., 6* The worship of false gods or of no gods at all; heathenism.
palatal (*pal*-i-t'l) *adj., 6* A sound made with the tongue held close to the palate, or roof of the mouth.
palette (*pal*-et) *n., 11* The thin oval or oblong flat piece of wood on which the painter lays his colors.
pallet (*pal*-it) *n., 11* A small and humble bed.
palpable (*pal*-puh-b'l) *adj., 4* Easily perceived (as an error) obvious.
palpitate (*pal*-pih-tayt) *v., 4* To beat violently as the heart after bodily exertion, to flutter pant, or throb.
pandemonium (pan-*duh-moh*-nee-um) *n 3* The temple or abode of all the demons hence, wild uproar
pander (*pan*-der) *v., 14* To minister to the passions or prejudices of others, generally for selfish ends; to cater or serve basely
parabolical (pair-uh-*bol*-ih-k'l) *adj., 5* Expressed through parable, that is, a short narrative conveying a moral lesson.
paradox (*par*-uh-doks) *n., 9* A contradictory statement—either seemingly or really contradictory
paragon (*par*-uh-gon) *n., 8* A model of excellence.
paramour (*par*-uh-moor) *n., 3* A lover used in an uncomplimentary sense.
paranoiac (par-uh-*noy*-ak) *n., 5* One suffering from a mental disorder characterized by systematized delusions, usually of persecution.
paraphrase (*par*-uh-frayz) *n., 1* A loose or free translation, usually in simpler terms and shorter compass.
parasite (*par*-uh-syte) *n., 13* A plant or animal who lives in or on another; a person who lives on the hospitality or patronage of others without making any return.
paresis (puh-*ree*-sis) *n., 20*. Incomplete paralysis affecting movement but not sensation.
pariah (puh-*ry*-uh) *n., 7* An outcast, one despised by society

parity (par-ih-tee) *n.*, 6 Equality, similarity or analogy.
parody (par-uh-dee) *n.*, 5 An alteration of verses or words of a serious composition in order to burlesque it.
parse, *v.* 4 To resolve a sentence into its elements: to name the parts of speech in a sentence and tell their relation to one another.
parsimonious (par-sih-moh-nee-us) *adj.*, 4. Extremely frugal; stingy to an extreme.
passive (pass-iv) *adj.* 11 Submissive, enduring without resistance.
patent (pat-nt, pay-tnt) *adj.* 11 Plain, evident, open.
paternalism (puh-ter-nl-izm) *n.* 6 The practice by a company, organization, or state of treating its employees, its members, or its citizens as a father treats his children.
pathos (pay-thos) *n.*, 11 The quality in life, art or literature that awakens tenderness and sympathy.
patriarch (pay-tree-ark), *n.*, 28 A venerable old man; the head or founder of a tribe; a church dignitary.
paucity (paw-sih-tee) *n.*, 15 Scarcity or fewness.
peccadillo (pek-uh-dil-oh) *n.*, 7 A petty offense.
pecuniary (peh-kyoo-nee-er-ee) *adj.* 4. Pertaining to money.
pedigree (ped-uh-gree) *n.*, 5 Line of descent.
penchant (pen-chant) *n.*, 5 Inclination or preference.
pensive (pen-siv) *adj.* 19 Weighing or considering in melancholy fashion; thoughtful and sad.
peregrination (per-uh-gruh-nay-shun) *n.*, 16. A wandering from place to place; journey (especially abroad).
peremptory (per-emp-tor-ee) *adj.*, 9 Shutting off debate; positive, final.
perfidious (per-fid-ee-us) *adj.*, 11 False to trust or confidence; treacherous, faithless.
perfunctory (per-funk-tor-ee) *adj.* 17 Careless, superficial, indifferent.
periphery (peh-rif-er-ee) *n.* 11 Circumference, perimeter, edge, outer line.
periphrasis (peh-rif-ruh-sis) *n.*, 19 A roundabout or indirect way of speaking; circumlocution; the use of more words than are necessary.
peroration (pehr-oh-ray-shun) *n.*, 6 The concluding part of a formal speech or sermon.
personification (per-son-ih-fih-kay-shun) *n.*, 9 Investing things or ideas with the characteristics of human beings.
perspicuity (per-spih-kyoo-ih-tee) *n.*, 1. Easy understandability; plainness, lucidity, distinctness.
peruse (peh-rooz) *v.*, 22. To read, especially to read with care and at

pettifogger *n.*, 11 One who practices petty trickery, especially a lawyer who does.
petulance (petch-oo-lahns) *n.*, 11. Irritation or ill-humor, especially stemming from trivial causes.
pharisaicalness (fair-uh-say-ik-l-ness) *n.* 16 Seeming righteousness, hypocritical morality.
Philistine (fil-is-teen) *n.*, — One who lacks interest in or is indifferent to art, literature, and culture generally.
philippic (fih-lip-ik) *n.* 18 A discourse or speech full of invective, as Demosthenes' orations against Philip of Macedonia.
phlegmatic (fleg-mat-ik) *adj.* 19 Dull, sluggish, not easily excited to passion or action.
picayune (pik-ih-yoon) *n.* 16 Something [illegible]
Pickwickian (Pik-wik-ee-un) *adj.* 18 Characteristic of Mr. Pickwick, hero of Charles Dickens' *Pickwick Papers* (1836).
pillage (pil-ij) *n.* 1 Plunder, spoil, booty.
piquant (pee-kunt) *adj.* 17 Agreeably sharp or tart; provocative, stimulating.
plagiary (play-jer-ee) *n.* 16 The act of passing off another man's writings as one's own.
Platonic (pluh-ton-ik) *adj.* 14 Pertaining to Plato (427?-347 B.C.) or his philosophy, especially to his idealism.
plausible (plaw-zih-bl) *adj.* 1 Reasonable, fair, credible; at least superficially.
pleonasm (plee-oh-nazm) *n.* 17 The use of more words than necessary; words whose omission leaves the idea intact.
plethoric (pleh-thor-ik) *adj.* 19 Having an excess; overfull.
poignant (poyn-yunt) *adj.* 17 Distressing, painful, piercing; keenly or sharply appealing.
polyandry (pol-ee-an-dree) *n.*, 19 The practice of women having more than one husband at a time.
polyglot (pol-ee-glot) *n.*, 10 One who knows several languages.
portentous (powr-ten-tus) *adj.* 16. In a manner that indicates something is about to happen, especially something momentous—occasionally something calamitous; ominous.
posthumous (pos-choo-mus) *adj.* 19 Taking place after one's death, used especially with reference to a child born after his father's death or a book published after its author's death.
potential (po-ten-shl) *adj.* 9 Possible, as contrast to actual; not existing but capable of existing.
potpourri (poh-poo-ree) *n.*, 7 A mixture of various ingredients; a medley, a miscellany.

pragmatic (prag-mat-ik) *adj.* 18 Pertaining to [illegible]
precious (presh-us) *adj.* 18 Affected [illegible]
precipitate (pre-sip-ih-tayt) *v.* 18 To bring on [illegible]
precipitous [illegible] *adj.* 1 Very steep.
preclude (pre-klood) *v.* 11 To shut out [illegible]
precocious (pre-koh-shus) *adj.* 11 Developing early, especially [illegible] powers.
precursor (pre-kur-ser) *n.* 1 [illegible] one or something that goes before [illegible] especially that indicates the approach; forerunner.
predatory (pred-uh-tor-ee) *adj.* [illegible]
predilection (pree-dih-lek-shun) *n.* 1 [illegible]
preposterous (pre-pos-ter-us) *adj.* 11 Contrary to reason and common sense; absurd.
primal (pry-ml) *adj.* 1 First in [illegible] of time; original.
procrastinate (pro-kras-tih-nayt) *v.* 11 To put off; to delay.
proclivity (pro-kliv-ih-tee) *n.* 11 Bent, proneness, tendency [illegible]
Procrustean (Pro-krus-tee-un) *adj.*, 14 Pertaining to Procrustes, a [illegible] of ancient Greece who [illegible] his victims by placing them on an iron bed [illegible] by stretching their bodies or hacking off their legs; hence [illegible] tendency [illegible] regardless of the [illegible]
prodigy (prod-ih-jee) *n.*, 1 Something or someone [illegible] that excites wonder or admiration.
profaning (proh-fayn-ing) [illegible] *adj.* 11 Debasing or desecrating something, treating something religious irreverently or impurely.
progeny (proj-eh-nee) *n.* 17 Offspring, descendants.
proliferation, *n.* 11 Growth by rapid reproduction of new parts, as by budding.
prolific (proh-lif-ik) *adj.* 19 Producing young or fruit (and, by extension, other things as well) in abundance; fruitful, productive.
prolix (proh-liks, proh-liks) *adj.* 5 Long-winded, diffuse, verbose.
promiscuous (proh-mis-kyoo-us) *adj.* 11 Mixing unlike things; unselectively, indiscriminating or casual, especially with regard to sexual relations.
promulgate (proh-mul-gayt) *v.* 5 To make known by open declaration; to publish or proclaim.

propitiatory (proh-*pish*-ee-ay-tor-ee) *adj.*, *20* Intended to conciliate, or conciliating

proponent (proh-*poh*-nent) *n.*, *18* One who makes a proposal or lays down a proposition hence, one who advocates or supports an idea, policy cause, doctrine, or the like.

proscribe (proh-*skrybe*) *v.*, *1* To outlaw; to banish; to denounce or prohibit.

proselyte (*pros*-eh-lyte) *n.*, *12* A convert.

protagonist (proh-*tag*-uh-nist) *n.*, *5* One who takes a leading part, chief actor

protean (*proh*-tee-an) *adj.*, *14* Changing readily either in shape or principles after Proteus, in Greek mythology a sea god who was able to assume different forms at will.

protectorate (proh-*tek*-ter-it) *n.*, *17* A state, nominally free, whose foreign policy and sometimes domestic affairs are controlled by a stronger state.

protocol (*proh*-tuh kol) *n.*, *10.* The code governing diplomatic etiquette.

provincialism (proh *vin*-shul-izm) *n.*, *6* A word, phrase, or pronunciation peculiar to a province or area of a country limitedness or narrowness of outlook.

psychotic (sy-*kot*-ik) *adj.*, *2.* Serious personality disorganization, grave mental derangement.

puissant (*pyoo*-ih-sant, *pwis*-sant) *adj* *19* Powerful, strong mighty

punctilious (punk-*til*-ee-us) *n.*, *7* Scrupulous (perhaps exact to excess) in observing forms, customs, rules of behavior

pundit (*pun*-dit) *n.*, 7 A learned teacher or critic, an authority—often applied humorously

pungent (*pun*-jent) *adj.*, *13* Literally sharp to the taste or smell; by extension, sharp, biting penetrating (especially in speech)

purgatory (*per*-guh-tor-ee) *n.*, *8* A state of penitential suffering where the souls of the dead are purified; by extension, any state of temporary suffering

purple patch, *n.*, *10.* An ornate, highly colored passage of prose.

pusillanimous (pyoo-sil-*lan*-ih-mus) *adj* *13* Lacking firmness or courage, cowardly

Pyrrhic (*pir*-ik) *adj* *14* Applied to an excessively costly triumph (*Pyrrhic victory*)—in reference to the victory of Pyrrhus, king of Epirus, over the Romans in 279 B.C.

Q

quatrain (*kwah*-trayn) *n.*, *8* A stanza of four lines.

quell (*kwel*) *v.*, *10* To subdue, put down or allay quiet.

querulous (*kwehr* yoo-lus) *adj.*, *9* Habitually complaining or whining

quidnunc (*kwid*-nungk) *n.*, *20* One who is curious to know everything that passes, a busybody—applied humorously or contemptuously

quiescent (kwee-*es*-ent, kwy) *adj.*, *16* Without motion, in repose, still and inactive.

quintessence (kwin-*tess*-ense) *n.*, *13* The pure, concentrated part of any thing the force, virtue, or spirit of a thing; in reference to the fifth essence—different from earth, water air and fire—of which (according to the Greek philosopher Pythagoras) the heavenly bodies were composed.

quixotic (kwiks-*ot*-ik) *adj* *14* Like Don Quixote, hero of Miguel de Cervantes satirical romance (1605 1615) idealistic and chivalrous, but impractical.

quizzical (*kwiz*-i-k'l) *adj.*, *11* Odd, eccentric; curious, questioning; bantering, teasing

quondam (*kwon*-d'm) *n.*, *15* At one time, former.

quotidian (kwoh-*tid*-ee-an) *n.*, *1* Daily recurring daily

R

Rabelaisian (Rab-uh-*lay* zhuhn, Rab-uh-*lay*-zi-uhn) *adj.*, *1* Like the French humorist, François Rabelais (1494–1553) or his works that is, broadly or robustly humorous, sometimes coarsely humorous.

raison d'être (re *zohn* *deh*-tr; Eng *ray* zawn *det*) *n.*, 7 Reason or justification for being

rakish (*reyk*-ish) *adj.*, *3* Loose, wanton, dissolute.

rampant (*ram*-p nt) *adj.*, *8* Running wild, spreading unchecked.

ratiocination (rash-ee-oss-ee-*nay* shun) *n.*, *18* The act or process of reasoning

rationale (rash-uh-*nal* rash-uh-*nah*-li, rash-uh-*nay*-li) *n.*, 20 The underlying reason or fundamental explanation.

raucous (*raw*-kus) *adj.*, *19* Hoarse, rough, harsh.

recalcitrant (rih-*kal*-sih-tr'nt) *adj.*, *13* Resistant to another's will or authority rebellious.

reciprocity (ress-ih-*pross*-ih-tee) *n.*, *8* Exchange of equal or corresponding rights or benefits between individuals, groups, nations, etc.

recourse (*ree*-kors) *n.*, *12.* A turning to with a request or application, a resort.

recur (reh-*kur*) *v.*, *17* To return: either to reappear or to come up again for consideration or discussion.

red herring, *n.*, *10* A person or tactic used to divert attention—in reference to the hunter s practice of drawing a red (smoked) herring across the trace to distract the hounds by providing them with false clues.

redolent (*red*-uh-lent) *adj* *5* Smelling of or suggestive of; sometimes, having a sweet scent.

redundant (reh-*dun*-dent) *adj.*, *12.* Exceeding what is natural or necessary excessive wordy unnecessary to the meaning.

referent (*ref*-er-uhnt), *n.*, *18* The thing idea, concept, feeling quality which a word symbolizes what a word stands for

refractory (reh-*frak*-tuh-ree) *adj.*, *19* Difficult to manage, obstinately unyielding

regalia (ree-*gay* lee-uh) *n.*, *4* Emblems and insignia of royalty; decorations and insignia of an office or order

regenerative (reh-*jen*-uh-ray-tiv) *adj.*, *18* Tending to renew re-create, restore, or reform.

regime (reh-*zheem*) *n.*, *4* Form or system of government, rule, administration; mode of living

regimen (*rej*-ih-men) *n.*, *4* Regulation of diet, hygiene, and habits for health.

regressive (reh-*gres*-iv), *adj.*, *4* Going back or backwards, returning

religiosity (reh-lij-i-*os*-uh-tee) *n.*, *1* Extremely religious, especially the pretense of being so.

remonstrate (reh-*mon*-strayt) *v.*, *3* To urge reasons against a measure or proceeding protest or object.

remorse (reh-*morss*) *n.*, *20* The pain of conscience caused by a sense of guilt.

renaissance (ren-uh-*sahns*) *n.*, *5* A birth or revival, especially (with initial capital) the rebirth of learning, art, and literature that took place in Europe during the 14th, 15th, and 16th centuries.

repertoire (*rep*-er-twahr) *n.*, *11* The plays, operas, songs that a company is ready to perform, or the parts that an actor or singer is prepared to play

resilient (reh-*zil* yent) *adj* *16* Bouncing springing, or leaping back; elastic ability to recover from difficulties or troubles.

restive (*res*-tiv) *adj.*, *17* Restless; obstinate in refusing to move forward; impatient under restraint or opposition.

retrogressive (ret ruh-*gres*-siv) *adj.*, *12* Going back, especially to an earlier and generally a worse condition or state, degenerative.

revere (reh-*veer*) *v.*, *12.* To regard with respect, affection, and honor

rhetorical (reh-*tawr*-i-k'l, reh-*tor*-i-k'l) **question**, *n.*, *18* A question asked for the effect it will have on an audience or on readers, not one asked for the purpose of receiving an answer

risible (*ri*-ih-b'l) *adj* *19* Exciting laughter laughable.

rodomontade (rod-uh-mon-*tayd* rod-uh-mon-*tahd*) *n.*, *14* Empty noisy

theater in reference to Rodomonte, a brave but proud and boastful character in Ariosto's *Orlando Furioso* (1516-32).

S

sacerdotal (sas-er-doh-tal) *adj.* 20 Priestly.
satyr (sat-er, say-ter) *n.* 14 One who devotes himself to sensual pleasures, from domineering or lewd motives.
salient (say-lee-ent) *adj.* 16 Conspicuous, noticeable, outstanding.
salubrious (sah-loo-bree-us) *adj.* 7 Promoting health.
sanctimonious (sank-tih-moh-nee-us) *adj.* 16 Affecting holiness or piety.
sanguinary (sang-gwih-nehr-ee) *adj.* 2 Attended by much bloodshed; eager to shed blood, bloodthirsty.
sardonic (sahr-don-ik) *adj.* 16 Bitterly and ironically sarcastic or scornful.
saturnine (sat-er-nyne) *adj.* 14 Under the influence of the planet Saturn; hence, sluggish, gloomy, taciturn.
savoir-faire (sa-vwahr-fair, sav-wahr-fair) *n.* Literally, "to know how to do"; ease and tact in social matters.
schism (siz'm) *n.* 16 A split or division.
scholasticism (skuh-las-tih-sizm) *n.* 6 Insistence on traditional and formal thinking, with reference to the system of logic and philosophy which was dominant in the middle ages and which based itself on Aristotle; formalism, pedantry.
scion (sy-un) *n.* 6 A small twig or branch cut from one tree and grafted on another; a descendant, especially of a noble, wealthy or noble family.
scot, *n.* 7 Money assessed, tax (as in *scot-free*).
scrupulous (skroo-pyoo-lus) *adj.* 12 Exact, careful, conscientious.
secular (sek-yoo-ler) *adj.* 12 Belonging to things of the present world, temporal, worldly (as distinguished from sacred or religious).
seductive (sih-duk-tiv) *adj.* 8 Enticing, persuasive.
senescence (seh-nes-ens) *n.* 13 The state of growing old.
sensuous (sen-shoo-us) *adj.* 8 Affecting, appealing to, or perceived by the senses.
sententious (sen-ten-shus) *adj.* 6 Short and pithy in expression, tending to moralize tersely.
sequestrate (seh-kwes-trayt) *v.* 20 To confiscate.
seraglio (sih-ral-yoh) *n.* The place in which a Moslem keeps his wives or concubines, a harem.
seraph (ser-af) *n.* 7 An angel in the highest order of angels.
sesquipedalian (ses-kwih-peh-day-lee-un) *adj.* 3 Measuring a foot and a half; hence, applied to words.
Shavian (shay-vee-un) *adj.* 14 Characteristic of George Bernard Shaw (1856-1950) or his work, as a writer, of Shaw.
shibboleth (shib-uh-leth) *n.* 7 A password of the Gileadites to detect the Ephraimites, who could pronounce only sibboleth (without the h); hence, any password or watchword.
shoddy (shod-ee) *adj.* 11 Cheap or fraudulent.
signification (sig-nih-fih-kay-shun) *n.* 8 Meaning, import, sense, denotation.
simile (sim-ih-lee) *n.* 9 A figure of speech in which two unlike things, which nevertheless have some point of resemblance, are compared. ("He is brave as a lion.")
simulation (sim-yoo-lay-shun) *n.* 9 Pretense, feigning, assuming appearance to be what one is not.
sinecure (sy-neh-kyoor, sih-) *n.* A position that yields an income but requires little or no work or responsibility.
sinister (sin-is-ter) *adj.* 11 Evil or corrupt, boding harm or misfortune.
sinuous (sin-yoo-us) *adj.* 11 Winding or bending in and out.
slovenly (sluv-n-lee) *adj.* 12 Lacking neatness and cleanliness in person, dress, work, or the like.
slurred, *adj.* 19 To pronounce rapidly and indistinctly.
sobriquet (soh-brih-kay) *n.* 2 A nickname or an assumed name.
Socratic (soh-krat-ik) *adj.* 14 Pertaining to the Greek philosopher Socrates (470-399 B.C.) or his methods of questioning, discussing and probing.
solecism (sol-eh-sizm) *n.* 14 An impropriety, especially in grammar or usage.
sophism (sof-izm) *n.* 4 A subtle but fallacious argument.
specie (spee-shee) *n.* 11 Coin, as distinct from paper money, especially gold or silver coin.
species (spee-sheez) *n.* 11 A distinct group of animals or plants, possessing in common well-defined characteristics.
specious (spee-shus) *adj.* 4 Plausible but false.
splenetic (spleh-net-ik) *adj.* 11 Troubled with spleen, hence, peevish, bad-tempered, fretful.
sporadic (spoh-rad-ik) *adj.* 18 Occurring at irregular intervals; separate and scattered.
spurious (spyoor-ee-us) *adj.* 19 Not genuine, counterfeit, false.
squalor (skwol-er, skway-ler) *n.* 4 Wretchedness, filthiness, especially resulting from poverty.
staccato (stuh-kah-toh) *adj.* 4 Short, distinct, generally used in reference to music.
statutory (stat-choo-tor-ee, stat-yoo-) *adj.* 1 Established by statute or law.
stentorian (sten-tor-ee-un) *adj.* 11 Very loud and powerful, like Stentor, a herald in the Trojan War described by Homer.
stigma (stig-muh) *n.* 11 Mark of disgrace, something that puts a blemish on reputation.
stoic (stoh-ik) *n.* 14 One of a sect of philosophers who taught that man should be free from passion and unmoved by the joys and sorrows of life; hence, one who is, or seems to be, indifferent to pleasure and pain, who accepts good and bad fortune unmoved.
stolid (stol-id) *adj.* Impassive, unemotional.
strident (stry-dent) *adj.* 1 Characterized by harsh, grating sounds, as speech.
subjective (sub-jek-tiv) *adj.* 11 Derived from the mind or consciousness, rather than from external objects or perceptions.
subornation (sub-bor-nay-shun) *n.* 1 Act of bribing or otherwise persuading someone to commit perjury or another crime.
subservient (sub-ser-vee-ent) *adj.* 12 Excessively submissive, servile, obsequious.
subtle (sut'l) *adj.* 1 Having or requiring fine perception or discernment; acute, penetrating.
succès d'estime (suk-seh des-teem) *n.* A critical success, but not a popular success.
succinct (suk-sinkt) *adj.* 11 Brief, compressed, terse.
succulent (suk-yoo-lent) *adj.* 11 Soft and juicy.
sullen (sul-un) *adj.* 19 Gloomy, morose, ill-humored, uncooperative, unsociable.
supercilious (soo-per-sil-ee-us) *adj.* 11 Haughtily disdainful, contemptuous.
supine (soo-pyne) *adj.* 19 Lying on one's back or with face upwards; sluggish, indolent, negligent.
svelte (svelt) *adj.* 7 Slender, lithe.
sybarite (sib-uh-ryte) *n.* 14 Someone devoted to luxury.
sycophantic (sik-uh-fan-tik) *adj.* 11 Flattering in mean and servile fashion, especially for self-interest.
syllogism (sil-uh-jizm) *n.* 8 An argument with two premises, one universal and one particular, from which a conclusion logically derives.
symbol (sim-b'l) *n.* 17 Something that represents an idea, institution, notion, mood, or the like; an emblem, token, or sign.
synecdoche (sih-nek-duh-kee) *n.* 11 A figure of speech in which a part

propitiatory (proh-*pish*-ee-ay-tor-ee) *adj.*, 20 Intended to conciliate, or conciliating

proponent (proh-*poh*-nent) *n.*, 18 One who makes a proposal or lays down a proposition; hence, one who advocates or supports an idea, policy cause doctrine, or the like.

proscribe (proh-*skrybe*) *v.*, 1 To outlaw to banish; to denounce or prohibit.

proselyte (*pros*-eh-lyte) *n.*, 12 A convert.

protagonist (proh-*tag*-uh-nist) *n.*, 5 One who takes a leading part, chief actor

protean (*proh*-tee-an) *adj.*, 14 Changing readily either in shape or principles; after Proteus, in Greek mythology a sea god who was able to assume different forms at will.

protectorate (proh-*tek*-ter-it) *n.*, 17 A state, nominally free, whose foreign policy and sometimes domestic affairs are controlled by a stronger state.

protocol (*proh*-tuh-kol) *n.*, 10. The code governing diplomatic etiquette.

provincialism (proh-*vin*-shul-izm) *n.*, 6 A word, phrase, or pronunciation peculiar to a province or area of a country limitedness or narrowness of outlook.

psychotic (sy-*kot*-ik) *adj.*, 2 Serious personality disorganization, grave mental derangement.

puissant (*pyoo*-ih-sant, *pwis*-sant) *adj.*, 19 Powerful strong mighty

punctilious (punk-*til*-ee-us) *n.*, 7 Scrupulous (perhaps exact to excess) in observing forms, customs, rules of behavior

pundit (*pun*-dit) *n.*, 7 A learned teacher or critic, an authority—often applied humorously

pungent (*pun* jent) *adj.*, 13 Literally sharp to the taste or smell by extension, sharp, biting penetrating (especially in speech)

purgatory (*per*-guh-tor-ee) *n.*, 8 A state of penitential suffering where the souls of the dead are purified; by extension, any state of temporary suffering

purple patch *n.*, 10 An ornate, highly colored passage of prose.

pusillanimous (pyoo-sil-*lan*-ih mus) *adj.*, 15 Lacking firmness or courage, cowardly

Pyrrhic (*pir*-ik) *adj.*, 14 Applied to an excessively costly triumph (*Pyrrhic victory*)—in reference to the victory of Pyrrhus, king of Epirus, over the Romans in 279 B.C.

Q

quatrain (*kwah*-trayn) *n.*, 8 A stanza of four lines.

quell (*kwel*) *v.*, 10 To subdue, put down or allay quiet.

querulous (*kwehr* yoo-lus) *adj.*, 9 Habitually complaining or whining

quidnunc (*kwid*-nungk) *n.*, 20 One who is curious to know everything that passes, a busybody—applied humorously or contemptuously

quiescent (kwee-*ess*-ent, kwy) *adj.*, 16 Without motion, in repose, still and inactive.

quintessence (kwin-*tess*-ens) *n.*, 13 The pure, concentrated part of anything the force, virtue, or spirit of a thing; in reference to the fifth essence—different from earth, water air and fire—of which (according to the Greek philosopher Pythagoras) the heavenly bodies were composed.

quixotic (kwiks-*ot*-ik) *adj.*, 14 Like Don Quixote, hero of Miguel de Cervantes' satirical romance (1605 1615) idealistic and chivalrous, but impractical.

quizzical (*kwiz*-i-k'l) *adj* 11 Odd, eccentric; curious, questioning bantering teasing

quondam (*kwon*-d'm) *n.*, 15 At one time, former

quotidian (kwoh-*tid*-ee-an) *n.*, 1 Daily recurring daily

R

Rabelaisian (Rab-uh-*lay* zhuhn, Rab-uh-*lay*-zi-uhn) *adj.*, 1 Like the French humorist, François Rabelais (1494–1553) or his works; that is, broadly or robustly humorous, sometimes coarsely humorous.

raison d'être (re *zohn deh*-tr Eng *ray* zawn *det*) *n.*, 7 Reason or justification for being

rakish (*rayk*-ish) *adj.*, 3 Loose, wanton, dissolute.

rampant (*ram*-p nt) *adj* 8 Running wild, spreading unchecked.

ratiocination (rash-ee-*os*-ee-*nay* shun) *n.*, 18 The act or process of reasoning

rationale (rash-uh-*nal* rash-uh-*nah*-li, rash-uh-*nay*-li) *n.*, 20 The underlying reason or fundamental explanation.

raucous (*raw*-kus) *adj.*, 19 Hoarse, rough, harsh.

recalcitrant (rih-*kal*-sih-tr nt) *adj* 13 Resistant to another's will or authority rebellious.

reciprocity (res-ih-*pros*-ih-tee) *n.*, 8 Exchange of equal or corresponding rights or benefits between individuals, groups, nations, etc.

recourse (*ree*-korss) *n.*, 12 A turning to with a request or application, a resort.

recur (reh-*kur*) *v.*, 17 To return either to reappear or to come up again for consideration or discussion.

red herring, *n.*, 10 A person or tactic used to divert attention—in reference to the hunter's practice of drawing a red (smoked) herring across the trace to distract the hounds by providing them with false clues.

redolent (*red*-uh-lent) *adj.*, 5 Smelling of or suggestive of; sometimes, having a sweet scent.

redundant (reh-*dun*-dent) *adj* 12. Exceeding what is natural or necessary excessive; wordy unnecessary to the meaning

referent (*ref*-er-uhnt) *n.*, 18 The thing idea, concept, feeling, quality which a word symbolizes; what a word stands for

refractory (reh-*frak*-tuh-ree) *adj.*, 19 Difficult to manage, obstinately unyielding

regalia (ree-*gay*-lee-uh) *n.*, 4 Emblems and insignia of royalty decorations and insignia of an office or order

regenerative (reh-*jen*-uh-ray-tiv) *adj* 18 Tending to renew re-create, restore, or reform.

regime (reh-*zheem*) *n.*, 4 Form or system of government, rule, administration; mode of living

regimen (*rej*-ih-men) *n.*, 4 Regulation of diet, hygiene, and habits for health.

regressive (reh-*gres*-iv), *adj* 4 Going back or backwards, returning

religiosity (reh-lij-i-*os*-uh-tee) *n.*, 1 Extremely religious, especially the pretense of being so.

remonstrate (reh-*mon*-strayt) *v.*, 3 To urge reasons against a measure or proceeding protest or object.

remorse (reh-*morss*) *n.*, 20 The pain of conscience caused by a sense of guilt.

renaissance (ren-uh-*sahns*) *n.*, 5 A birth or revival, especially (with initial capital) the rebirth of learning art, and literature that took place in Europe during the 14th, 15th, and 16th centuries.

repertoire (*rep*-er-twahr) *n.*, 11 The plays, operas, songs that a company is ready to perform, or the parts that an actor or singer is prepared to play

resilient (reh-*zil* yent) *adj* 16 Bouncing, springing, or leaping back; elastic ability to recover from difficulties or troubles.

restive (*res*-tiv) *adj* 17 Restless; obstinate in refusing to move forward; impatient under restraint or opposition.

retrogressive (ret-ruh-*gres*-siv) *adj.*, 12. Going back, especially to an earlier and generally a worse condition or state, degenerative.

revere (reh-*veer*) *v.*, 12. To regard with respect, affection, and honor

rhetorical (reh-*taur*-i-k'l, reh-*tor*-i-k'l) **question**, *n.*, 18 A question asked for the effect it will have on an audience or on readers, not one asked for the purpose of receiving an answer

risible (*ri*-ih-b'l) *adj.*, 19 Exciting laughter laughable.

rodomontade (rod-uh-mon-*tayd* rod-uh-mon-*tahd*) *n.*, 14 Empty noisy

Moor in reference to Rodomonte, a boastful and swaggering character in Ariosto's Orlando Furioso (1516-1532).

S

sabbatical (sah-bat-ih-kal) n., 25 Yearly.

sadist (sad-ist, say-dist) n., 11 One who derives pleasure, specifically sexual pleasure, from dominating or hurting another.

salient (say-lee-ent) adj., 11 Conspicuous, noticeable, outstanding.

salubrious (sah-loo-bree-us) adj., 7 Promoting health.

sanctimonious (sank-tih-moe-nee-us) adj., 11 Affecting holiness or piety.

sanguinary (san-gwih-nehr-ee) adj., 8 Attended by much bloodshed; eager to shed blood, bloodthirsty.

sardonic (sahr-don-ik) adj., 11 Bitterly and sneeringly sarcastic or mocking.

saturnine (sat-er-nyne) adj., 11 Under the influence of the planet Saturn; heavy, sluggish, gloomy, taciturn.

savoir-faire (sav-wahr-fair, sahv-wahr-fehr), n., 7 Literally "to know how to do"; ease and tact in social matters.

schism (sizm) n., 11 A split or division.

scholasticism (skoh-las-tih-siz'm) n., A doctrine or traditional and formal thinking, with reference to the system of logic and philosophy which was dominant in the middle ages and which based itself on Aristotle; formalism, pedantry.

scion (sy-un) n., 6 A small twig or branch cut from one tree and grafted on another; a descendant, especially of a wealthy, wealthy or noble family.

scot, n., 12 Money assessed, tax (as in scot-free).

scrupulous (skroo-pyoo-lus) adj., 12 Exact, careful, conscientious.

secular (sek-yoo-ler) adj., 12 Belonging to things of the present world, temporal, worldly (as distinguished from sacred or religious).

sedulous (sed-yoo-lus) adj., 8 Diligent, persevering.

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staccato (stah-kah-toh) adj., 4 Short, abrupt, distinct, generally used in reference to music.

statutory (stat-yoo-tor-ee, -toh-ree) adj., 7 Established by statute or law.

stentorian (sten-tor-ee-an) adj., 11 Very loud and powerful, like Stentor, a herald with a voice like thunder mentioned by Homer.

stigma (stig-mah) n., 11 A mark of disgrace, a stain on one's character or reputation.

Stoic (stoh-ik) n., 14 One of a sect of philosophers who taught that men should be free from passion and unmoved by the joys and sorrows of life; hence, one who is, or seems to be, indifferent to pleasure and pain, who faces good and bad fortune unmoved.

stolid (stol-id) adj., Impassive, unemotional.

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synecdoche (sih-nek-doh-kee) n., 11 A figure of speech in which a part

of a thing stands for the whole thing; or the whole for the part; or the special for the general, or the general for the special

synod (*sin*-ud) *n* 5 A council, especially an assembly of ecclesiastics to discuss church matters or policies.

T

taboo (tuh-*boo*) *n.*, 7 A traditional restraint or prohibition laid on certain things, people, words, activities, behavior or the like.

tacit (*tass*-it) *adj.*, 5 Not expressed, but understood nevertheless.

taciturn (*tass*-ih-tern) *adj.*, 20 Silent and reserved.

tangent (*tan*-j nt) *adj* 8 Touching as a straight line touching a curve at one point.

tangible (*tan*-juh-b'l) *adj.*, 8 Capable of being touched; real and definite.

telepathy (teh-*lep*-uh-thee) *n.*, 4 Thought transmission, mental communication without employment of the ordinary senses.

temerity (tuh-*mehr*-uh-tee) *n.*, 16 Recklessness, rashness.

temporal (*tem*-puh-r'l) *adj.*, 20 Pertaining to time; short lived; pertaining to life now in this world.

tentative (*ten*-tuh-tiv) *adj* 12. Not certain, experimental or provisional.

tenuous (*ten*-yoo-us) *adj* 1 Thin, unsubstantial, rarefied.

terpsichorean (terp-sih-kuh-ree-un) *adj* 15 Pertaining to Terpsichore, in Greek mythology the muse who presided over choral song and dance-hence, pertaining to dancing (often used humorously)

territory (*tehr*-ih-toh-ree) *n.*, 17 An area not admitted to the Union as a state but having separate legislature and a governor and other officers appointed by the President and Senate

theism (*thee*-izm) *n.*, 12 Belief in one God, without necessarily rejecting revelation (as the Bible, for example)—as distinguished from *deism*: belief in the existence of one or more gods as opposed to *atheism*.

Thespian (*thess*-pee-un) *n.*, 14 An actor or actress a writer of tragedies, like Thespis (6th century Greek dramatist)

thrasonical (thruh *son*-i-k'l) *adj.*, 14 Boastful, like Thraso in *The Eunuch* by Terence (Roman dramatist 185-159 B.C.)

tirade (*ty* rayd) *n.*, 11 A long denunciatory speech.

tonsure (*ton*-shehr) *n.*, 3 Act of shaving the crown of the head or clipping the hair perhaps for religious reasons; the part of a monk's head left bare by such an act.

topographer (tuh-*pog* ruh-fer) *n.*, 11 One who describes or delineates the surface features of an area.

torpid (*tor*-pid) *adj.*, 17 Sluggish, dull, inactive.

totalitarian (toh-tal-ih-*tair*-ee-un) *adj.*, 18 Relating to the single-party dictatorial state, one extending its influence over the whole of life (private and public) and demanding full submission from its citizens.

totem (*toh*-t m) *n.*, 17 The plant or animal that a primitive clan or family regards as having a blood relationship to it.

toxic (*tok*-sik) *adj* 9 Poisonous.

toxicology (tok-sih-*kol*-uh-jee) *n.*, 8 The science that studies poisons—composition, effects, analysis, detection, etc.

transcend (tran-*send*) *v.*, 10 To rise above, go beyond, surpass.

transpire (tran-*spyr*) *v.*, 20 To become known, to leak out; loosely to happen.

travesty (*trav*-ess-tee) *n.*, 19 A grotesque imitation.

truculent (*truk* yoo-l'nt) *adj.*, 17 Fierce, cruel, savage, destructive.

truncate (*trung*-kayt) *v.*, 3 To cut off to lop.

tryst (*trist tryste*) *n.*, 3 An appointed meeting place; an appointment to meet (especially by lovers)

tumid (*too*-mid, *tyoo*-mid) *adj.*, 3 Swollen, distended; inflated, pompous, bombastic.

turbid (*ter*-bid) *adj.*, 19 Muddy cloudy confused, perplexed, stirred up.

turgid (*ter* jid) *adj.*, 1 Swollen, distended; pompous bombastic, inflated (as language)

tycoon (ty-*coon*) *n.*, 7 Colloquially a financier or industrialist of great wealth, power, and influence.

U

ubiquitous (yoo-*bik*-wih-tus) *adj.*, 1 Present everywhere.

ulterior (ul-*teer*-ee-er) *adj.*, 1 Underlying what is apparent or explicit; concealed or hidden for a purpose

umbrage (*um*-brij) *n.*, 8 Resentment, offense (*to take umbrage*)

unconscionable (un-*kon*-shun-uh b'l) *adj.*, 20 Not influenced by conscience, unscrupulous.

uncouth (un-*kooth*) *adj.*, 10 Unrefined, crude.

unctuous (*unk*-choo-us) *adj.*, 2. Oily greasy especially in speech and manners.

undulate (*un*-dyoo-layt) *v.*, 20 To move up and down, as a wave to sway

ungainly (un-*gayn*-lee) *adj.*, 10. Clumsy awkward.

unique (yoo-*neek*) *adj* 9 Single, sole, without a like.

Unitarian (yoo-nuh-*tayhr*-i-uhn) *n.*, 16 One who believes that God is a single being and who asserts "the fatherhood of God, the brotherhood of man, the leadership of Jesus, salvation by character, and the progress of mankind onward and upward forever"

Universalist (yoo-nuh-*ver*-s'l-ist) *n.*, 16 One who believes that God will damn no man, that all men will ultimately be redeemed and saved.

urbane (er-*bayn*) *adj* 8 Courteous, polished.

utilitarian (yoo-til-uh-*tayhr*-i-uhn) *n.*, 11 One who believes that utility or usefulness is the standard of right conduct, that the greatest good of the greatest number ought to be the aim of society

uxorious (uk-*sawr*-i-uhs, ug *zoh*-ri-uhs) *adj* 16 Excessively fond of a wife, or submissive to her

V

vacuous (*vak* yoo-us) *adj.*, 20 Empty purposeless, inane, stupid.

vagary (vuh-*gair*-ee) *n.*, 18 A whimsical or eccentric purpose, thought, act, or the like.

valid (*val*-id) *adj.*, 16 Soundly based on fact, reasoning, truth, or the like.

vapid (*vap*-id) *adj.*, 2. Without flavor or taste, dull, insipid.

variant (*vair*-e-unt) *adj.*, 10 Differing from the standard or type or from others of the same general class.

vehement (*vee*-uh-m nt) *adj.*, 17 Very forceful; ardent or intense.

venal (*vee*-n'l) *adj* 8 Obtainable for a price, mercenary

vendetta (ven-*det*-uh) *n* 7 A blood feud; loosely any prolonged and unrestrained quarrel.

venial (*veen*-yul) *adj.*, 8 Excusable.

verbal (*ver*-b'l) *adj.*, 12. Pertaining to words, generally but not necessarily spoken words.

vertigo (*ver*-tih-goh) *n.*, 9 Dizziness, giddiness.

vestigial (ves-*tij*-i-uhl) *adj.*, 9 Pertaining to something present only in traces.

virtuoso (ver-choo-*oh*-soh) *n.*, 7 One skilled in an art, especially a greatly skilled musician.

vituperation (vy-*too*-per-ay-shun, vih- -*tyoo*-) *n.*, 6 Wordy abuse, violent censure.

voluptuous (vuh-*lup*-choo-us) *adj.*, 1 Sensual, given to the pleasures of the senses, or delighting the senses.

voracious (vo-*ray*-shus) *adj.*, 1 Greedy ravenous; eager avid.

W

wanton (*wahn*-t'n) *adj.*, 11 Lewd, dissolute.

wary (*wehr*-ee) *adj.*, 12. Cautious, prudent, watchful.

wayward (*way*-werd) *adj* 12 Unruly disobedient, perverse; rejecting advice or guidance.

weir (*weer*) *n.*, 4 Dam to raise water

land, a fence set in a body of water for catching fish.
welkin (wel-kin) n., E The sky
Weltanschauung (velt-ahn-shou-oong) n., G Literally "world view"; a comprehensive philosophy
Weltschmerz (velt-shmerts) n., G Personal sorrow evoked by the sorrows of the world-generally pessimistic philosophy
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